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GOVERNMENT OF INDIA

RAILWAY DEPARTMENT

(RAILWAY BOARD)

REPORT

BY THE

RAILWAY BOARD

ON

INDIAN RAILWAYS

FOR

1932-33

Volume I

DELHI: MANAGER OF PUBLICATIONS
1934

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(2) Classified List and Distribution Return of Officers of all Indian Railways. Published half-yearly. Price Rs. 1-12-0 or 3*s*.

(3) History of Indian Railways, constructed and in progress corrected up to 31st March 1928. Published quinquennially. Price Rs. 5-8-0 or 9*s*.

(4) History of Services of the Officers of the Engineer and Superior Revenue Establishment of State Railways. Published yearly. Price Rs. 23-8-0 or 37*s*.

(5) Pocket edition of the Schedules of dimensions for the 5′ 6″ gauge (reprinted in 1933), price Re. 1 each, 3′ 3⅜″ gauge (revised 1930), price Re. 1 each, 2′ 6″ gauge (revised and reprinted edition, 1930), price annas 5 each, and 2′ 0″ gauge, 1922, price Re. 1 each.

(6) Manual of Instructions for the Installation and Maintenance of Signalling and Interlocking, 1929, price Re. 1 each.

(7) Manual of Instructions for the Installation and Maintenance of Block Signalling Apparatus, 1932, price Re. 1 each.

TECHNICAL PAPERS.

(8) Over 285 papers have been published by the Railway Board's office. The papers comprise :—

(*a*) Original descriptions of railway works and studies of railway problems in India and elsewhere.

(*b*) Reprints of articles from foreign engineering magazines.

(*c*) Reprints or abstracts of reports received by the Government of India on subjects connected with railways.

A complete list of the papers can be obtained *gratis* from the Chief Controller, Standardisation, Central Standards office for Railways, Simla/New Delhi. A few of the more important Technical papers are mentioned below :—

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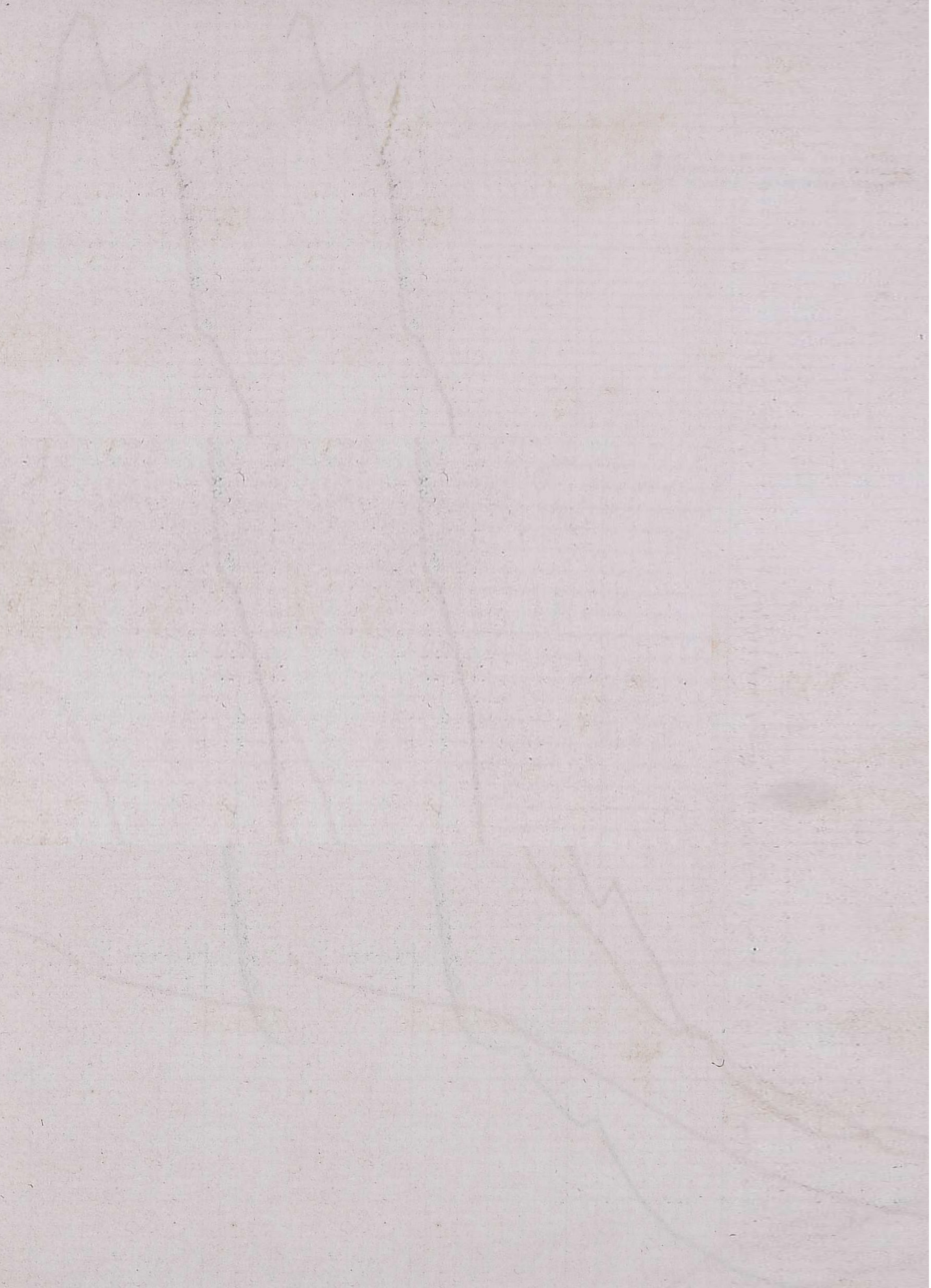

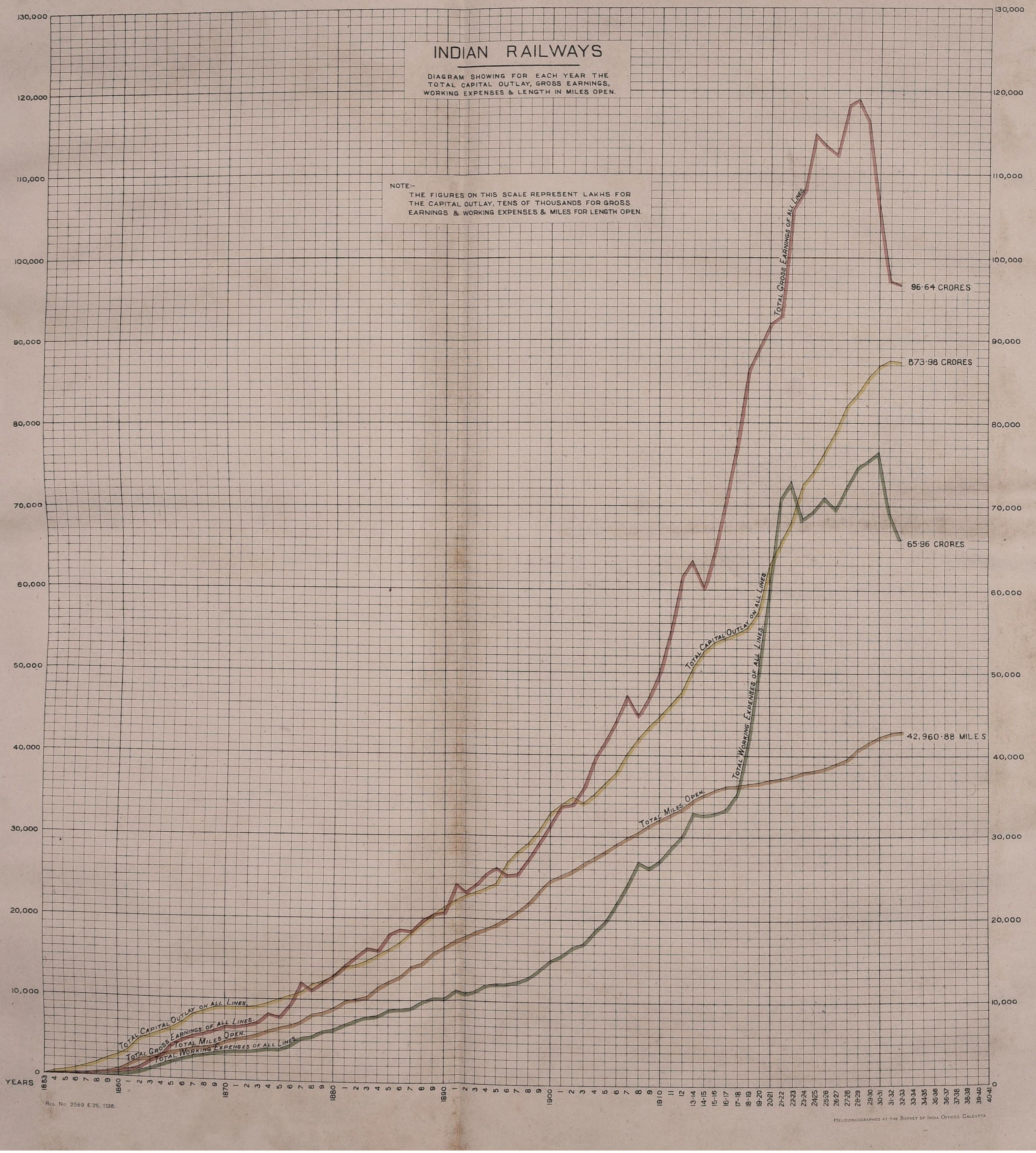

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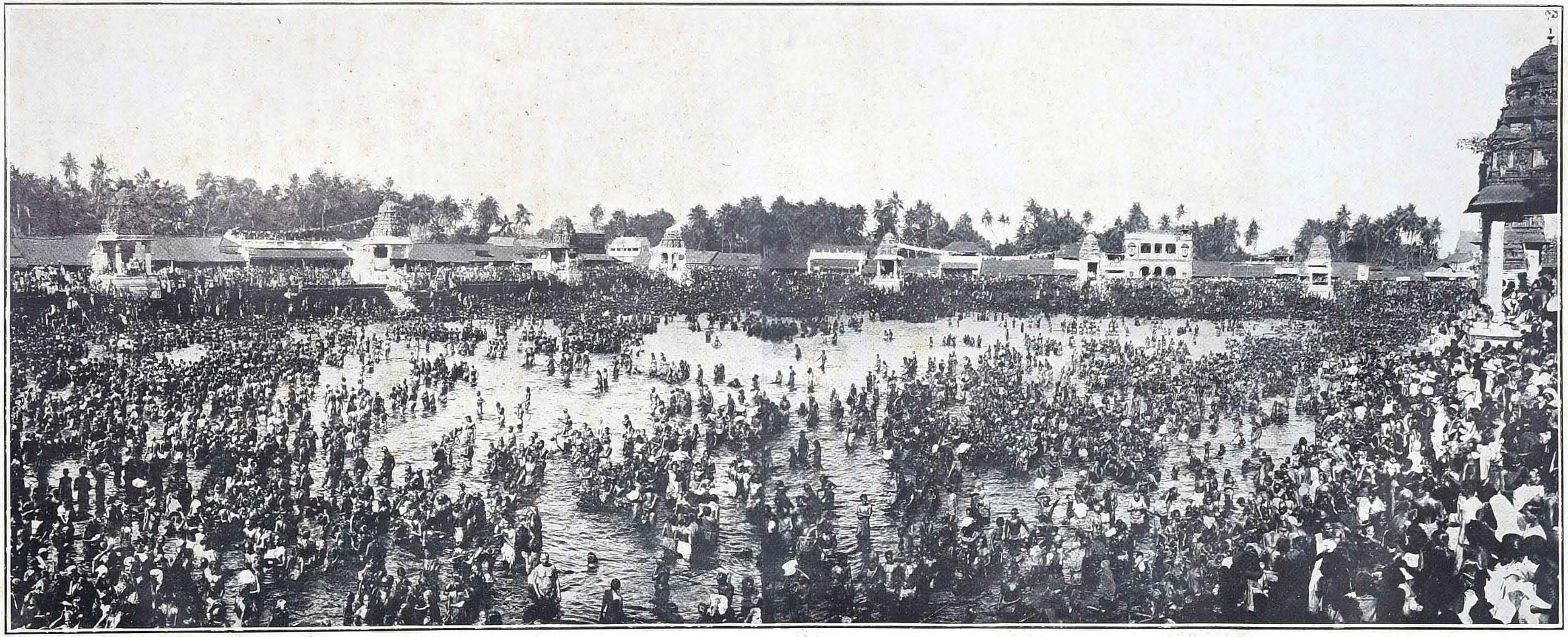


The Mahamagham Festival, 1933: Pilgrims bathing in the Mahamagham Tank, Kumbakonam.

CHAPTER 1.

GENERAL REVIEW.

1. Introduction.—The Annual Report of the Railway Board on Indian Railways is prepared for the financial year as reckoned from the 1st April in one year to the 31st March in the succeeding year, and is published in two volumes.

Volume I reviews the general administration, financial results of the working of railways and also comments upon important developments that occurred during the year. Various aspects connected with railway management and operation, such as the construction of new railway lines, and rolling stock, improvements in and additions to the methods of transportation, establishment matters such as the recruitment and the training of staff and steps taken to ameliorate the conditions of living and the welfare of the staff and other matters of public interest, are commented upon.

Volume II is a compilation of financial and statistical summaries and statements covering the main heads of the capital and revenue accounts and exhibiting statistics connected with the various aspects of railway working.

2. Monsoon conditions and agricultural results.—Unlike many industrial countries, the welfare and general prosperity of the people of India, which is mainly an agricultural country, is very largely dependent on the incidence and effectiveness of the monsoon rainfall. As this indirectly affects the railways, which are the main carriers of agricultural products, a few remarks about the monsoon conditions on the plains of India and their effect on the agricultural output will not be out of place. The monsoon of 1932 was fairly normal and well distributed, in spite of a weak start and a prolonged break in August. The total rainfall during the monsoon period was on an average 3 per cent. below normal over the plains of India, being in excess of the normal during the latter half of the monsoon period in Bengal, Bombay, Mysore, Assam, Bihar and Orissa, Punjab, Hyderabad and Madras. The rainfall for the year as a whole was within 20 per cent. of the normal.

From the agricultural aspect, the season was favourable on the whole and crops fairly good. The rice crop, though it fell short of last year's plentiful harvest by 7 per cent, may be considered satisfactory, as it almost equalled the average of the preceding five years. The sugarcane crop of 1932-33 exceeded the previous year's record yield by 17 per cent. As compared with the previous year, the percentage increase in the output of cotton was 12, sesamum 14, groundnut 25, and castor seed 1 per cent., respectively. Owing to restricted cultivation, the quantity of jute produced reached only 5,800 thousand bales which, though slightly greater than the previous year's yield, was still barely half the average of the preceding five years. The wheat crop of 1931-32—which was mostly moved during the year under review—was 3 per cent. less than that in the preceding season, but was slightly above the average of the preceding five years. The output of rape, (mustard) and linseed crops for 1931-32 also showed increases of 4 and 10 per cent. respectively as compared with the preceding season.

3. The depressed state of Indian trade during 1932-33 is reflected in the continued decrease which has to be recorded in the gross earnings of the railways. The earnings of State-owned railways fell from Rs. 86 crores in 1931-32 to Rs. 84 crores in 1932-33, representing a decrease of approximately 2 crores and the net loss from the working of State-owned railways was over 10 crores. No contribution to general revenues could therefore be made during the year. The decline in earnings was mainly due to the fall in goods traffic. The earnings from passenger traffic on all railways both State-owned and others was 31·3 crores, almost the same as in the preceding year, while the earnings from goods carried fell by nearly two crores from Rs. 58·7 crores to

Rs. 56·9 crores. The more important decreases in the movement of goods traffic were in the export of jute, cotton, food grains and oilseeds.

4. Increased mileage.—A further 306 miles were opened during the year under review, of which 154 belong to the State. Owing to the closing down of Nokkundi-Zahidan and Landi Kotal-Landi Khana Sections of the North Western Railway and dismantlement of certain sections of the Bengal and North-Western, Eastern Bengal and North Western Railways and also to re-alignment, the net addition to the mileage of railways during the year was 148. In addition to this, 37 miles were under construction on 31st March 1933.

5. Railways and the Legislature.—As in past years members of the Legislature displayed a keen interest in railway matters. Out of a total of 3,788 questions answered in both the Houses, during the three sessions held in 1932-33, 926 referred to the Railway Department.

Two bills to amend the Indian Railways Act—one to amend Section 51, so as to allow certain Railway Companies to start motor services, and the other to amend Sections 108 and 131 to provide severer punishment for attempting unnecessarily to stop trains—were introduced in the Legislative Assembly. The former was considered by a Select Committee during the year and passed in September 1933.

Three resolutions dealing with Railways came up for discussion in the Legislature during the year—two in the Legislative Assembly and one in the Council of State.

The first resolution referred to the establishment of a permanent Board for the purchase of coal for State-managed Railways and to administer State-Railway Collieries. The mover (Mr. Ghuznavi) subjected the coal purchase policy of Railways to severe criticism alleging extravagance in the purchase of coal for State-managed Railways combined with a lack of supervision by the Railway Board. He also suggested a change in the procedure for opening tenders. Mr. S. C. Mitra moved an amendment demanding an enquiry into the working of the State-Railway Collieries. The Financial Commissioner of Railways, Mr. P. R. Rau, explained to the House the policy of Government and the manner in which tenders for the State-managed Railways' requirements of market coal were considered in detail by the Railway Board. The suggestion made by him and supported by the Finance Member (Sir Alan Parsons) that the questions raised were suitable for investigation by the Public Accounts Committee and that an *ad hoc* Committee was unnecessary, was accepted by the House and the resolution was withdrawn.

The second resolution related to the revision of the Policy and Administration of Indian Railways, moved by Dr. Ziauddin Ahmad. He opened the debate with a criticism of the existing policy of borrowing money and suggested that the Government could secure money at a cheaper rate by issuing debentures. He put forward several suggestions for more efficient administration; chief among them being, (i) the purchase of Company-managed Railways by the State, and (ii) the amalgamation of smaller railway concerns with the bigger systems. He thought that an Agent for each Railway was unnecessary and that Railways should follow the example of the Post Office, with one Provincial Headquarters, or adopt the form of organisation in the Army. He suggested a change in the Convention of 1924 so that a proportion of the railway profits available when there was a surplus could be utilized for improving the conditions of staff or reducing rates. He urged that a Statutory body should be set up by the Legislative Assembly to control Railway policy. The Honourable the Commerce Member replying on behalf of the Government promised to give careful consideration to these suggestions. This resolution was also withdrawn.

The third resolution was moved in the Council of State by the Hon'ble Rai Bahadur Lala Ram Saran Das regarding the withdrawal or reduction of the surcharge on coal for traffic carried for distances of 1,000 miles and above. The mover pointed out that, while the basic rates for coal were

telescopic, this principle had been ignored in levying the surcharge. Moreover he considered it unjust that certain coal which had been exempted from the surcharge should be accorded preferential treatment. He endeavoured to prove by figures that the surcharge was responsible to a large extent for the fall in the traffic. He argued that Indian industries needed more assistance in days of depression and this could only be given by reducing or withdrawing the surcharge on coal. Sir Phiroze Sethna and Sir Edward Benthall were unable to support a partial reduction or withdrawal and advocated the complete abolition of the surcharge in the interests of the producers. Sir Guthrie Russell (Chief Commissioner of Railways) was not prepared to accept the statement that the withdrawal of the surcharge would bring more coal traffic to Railways. He stated that the surcharge had produced about Rs. 64 lakhs revenue in twelve months. Moreover there was no evidence to show that it had adversely affected coal traffic and the fall in traffic might be attributed to general trade depression. He promised to consider whether the surcharge had effected a decrease in the coal traffic, more especially for long distances and, if so, whether any action could be taken to remedy this. The Honourable the mover was satisfied with this promise and the resolution was then withdrawn.

6. Railway Budget.—The Railway Budget for 1933-34 was presented to both the Houses of the Legislature on the 16th February 1933, after it had been considered in detail by the Standing Finance Committee for Railways. The general discussion of the budget took place in the Council of State on the 18th February 1933, and in the Legislative Assembly on the 20th February 1933. The voting on the Demands for Grants in the Assembly occupied four days, *viz.*, the 21st, 22nd, 23rd and 25th February 1933.

The general discussion on the budget covered as usual a wide field of subjects, the most important of which were the utilisation of the existing facilities for cheap money for the programme of capital works, coal purchases and expenditure on collieries, the surcharge and high freight on coal, the stimulation of traffic by reduction in fares and freight, the examination of the causes for the fall in the railway revenue, and the possibility of further retrenchments in expenditure.

Of the motions for reduction made in the course of debates on the voting of Demands for grants, the most important related to the general policy and administration of the Railway Board. The Assembly took two days for the discussion of this motion which was ultimately negatived. The next two important motions for reduction were for discussing the paucity of Muslims in the railway services and the possibility of further reduction in the number of Members of the Railway Board and in the pay of superior officers of the Railway Board. After a full debate, the first motion was negatived, and the second was withdrawn. The other questions raised were of minor importance, and the motions relating to them were negatived, and the Demands for grants were voted in full by the Assembly.

7. Standing Finance Committee for Railways.—The committee met seven times in the year. Besides scrutinising the capital programmes of railways and discussing the budget estimates of 1933-34, it considered proposals for the creation of certain superior posts on railways and the re-organisation of the Mechanical Department (Production) of the Burma, East Indian and North Western Railways. The Committee considered also changes in the forms of certain demands for grants for railway expenditure.

8. Meetings with Agents of Railways and Local Governments.—Three meetings were held with the Agents of the principal Railways, in April and October 1932 and March 1933. The following subjects, among others, were discussed :—

(1) Road motor competition.

(2) Training of railway officers.

(3) Hours of work and number of holidays in railway offices.

(4) Reduction in receipts and working expenses.
(5) Lump sum or "All in" contracts.
(6) Productivity of Capital expenditure—comparison of the financial results actually achieved with those anticipated.
(7) System of ticket checking on trains.
(8) Broad gauge un-economical wagons.
(9) Limitation of expenditure to reduced allotments.
(10) Co-ordination of road development with railways.
(11) Revision of the scales of pay of future entrants into the subordinate establishments of the State-managed Railways.
(12) Voluntary retirement of staff in connection with retrenchment.
(13) Mr. Pope's Report.
(14) Utilisation of surplus second-hand broad gauge rails.

Members of the Railway Board paid several visits to the headquarters of Local Governments and Railways during the course of the financial year and on these occasions took the opportunity of discussing with Local Governments, the Agents of Railways and important Mercantile Associations on railway matters of public interest.

9. Central Advisory Council for Railways.—During the year under review one meeting of the Central Advisory Council for Railways was convened at New Delhi on the 17th of March 1933. The subjects discussed were:—

(*a*) Formation, constitution and functions of Committees of representative members of Minority communities for the purpose of assisting railway administrations in the recruitment of non-gazetted employees, and

(*b*) A proposal that, in future tables of Staff statistics in the Administration Report, separate entries be given for "Sikhs" and "Indian Christians" who are at present included under "Other Classes".

As regards (*a*), some members expressed the opinion that the existing Local Advisory Committees could undertake the duty of assisting Railways in the direction needed, while others favoured the creation of special communal committees for the purpose. A minority disapproved of such committees, as tending to widen communal differences and to prevent Railways securing the best possible applicants in the interest of efficiency.

In regard to (*b*), the majority of the members stated that they had no objection to the proposal.

Before concluding the meeting the Chairman alluded to future procedure and stated that he hoped to arrange regularly two meetings annually, one at Delhi and one at Simla. He also invited members of the Council to send for the consideration of the Railway Board subjects for inclusion in the agenda, such subjects to be confined to important matters of general public interest.

10. Local Railway Advisory Committees.—Reference has been made in previous reports to the useful work that is being done by the Local Advisory Committees on Railways which have continued to function on all Class I Railways (except the Jodhpur Railway) and on the Barsi Light Railway. These Committees constitute a valuable link between railway administrations and the travelling public affording, as they do, opportunities for discussion on matters of interest and importance to the general public, and their advice on matters coming within their purview is welcomed by railway administrations.

During the year under review 110 meetings of the various committees were held. Particulars of the subjects discussed at these meetings and the

action which the railway administrations concerned decided to take thereon are embodied in pamphlets published quarterly by the Railway Board. The following is a list of some of the more important matters discussed :—

Improvements in coaching stock.
Provision of cold storage compartments.
Provision of Indian dining cars.
Reduction of rates and fares.
Arrangements for dealing with traffic at festivals.
Reservation of seats in intermediate class carriages.
Supply of drinking water to passengers.
Sleeping accommodation for passengers.
Provision of bathing cabins at stations.
Despatch and delivery of goods.
Pontage charges over railway bridges.
Overcrowding in lower class carriages.
Provision of waiting rooms for ladies.
Construction of culverts and permanent openings for flood waters.
Electrification of railway stations.
Provision of overbridges
Remodelling of stations.
Mileage coupons.

11. Railway Rates Advisory Committee.—The Railway Rates Advisory Committee which was constituted in 1926 continued to function till 7th December 1932, under the Presidentship of Sir Narasimha Sarma, K.C.S.I. Owing to his death on 8th December 1932, the sittings of the Committee were temporarily suspended pending the appointment of a new President.

Opportunity was taken at this stage of formulating proposals for the future conduct of the work of the Committee. It was decided :—

(i) to appoint as a whole-time President a retired High Court Judge on a salary of Rs. 2,000 per mensem in addition to his pension.

(ii) to appoint a railway officer to combine the duties of Railway Member and Secretary on his substantive pay *plus* a special pay of Rs. 300 per mensem.

The above proposals were actually given effect to during the following year and Sir Zahid Suhrawardy was appointed President.

During the year under review the following 5 cases were referred to the Railway Rates Advisory Committee for investigation and report and were pending at the close of the year.

(*a*) Complaint from Messrs. Radhakishen Mangatrai and Jeetmal Kanaudia, regarding the unreasonableness of the rates for salt from Sambhar to stations on the Bengal and North-Western Railway.

(*b*) Complaint from the Central Provinces and Berar Mining Association against the Bengal Nagpur Railway for imposing block rates on manganese ore from the mines to Bombay *viâ* Nagpur.

(*c*) Complaint from the Roller Flour Mills, Patiala, regarding the enhancement of rates for flour on the East Indian Railway.

(*d*) Complaint from the Tanjore and South Arcot Millowners' and Merchants' Association that the rates for rice over the South Indian Railway are unreasonable and that the rates charged from certain stations on the South Indian Railway to Colombo and Galle on the Ceylon Government Railway, constitute undue preference against other stations.

(*e*) Complaint from Mr. Dalchand Bahadur Singh, Calcutta, regarding the unreasonableness of the rates for coal from Korea Coalfields to stations on the Bengal Nagpur, Great Indian Peninsula and Bombay, Baroda and Central India Railways, as compared with the rates from the collieries on the Great Indian Peninsula Railway.

The Committee reported on the case of the Colliery Owners' Association, Chhindwara *vs.* the Great Indian Peninsula and Bengal Nagpur Railways (referred to in the last year's report) regarding the rates and through booking facilities for coal from colliery stations in the Central Provinces situated on the Bengal Nagpur Railway. In this case the Government of India agreed with the recommendations of the Committee as to the introduction of through booking facilities from the Bengal Nagpur Railway *viâ* Parasia, which supported the applicant's contention. As regards the rates, Government accepted the views of the Committee that the rates over the Great Indian Peninsula Railway's portion should be charged at the Central Provinces coal scale, which partially met the request of the applicant.

In addition to the 5 cases referred to the Committee during the year, 7 more cases were received by the Railway Board for reference to the Railway Rates Advisory Committee. Two of these were subsequently withdrawn by the applicants, two were rejected by the Board as the applications were not in order and three were under correspondence with the Railway Administrations concerned.

12. Mr. Pope's Investigations.—To ascertain whether further economies were possible on Indian Railways, the Government of India obtained, by the kindness of the London Midland and Scottish Railway, the services of Mr. Pope, General Executive Assistant to the President of that railway. Mr. Pope had been closely in touch with the various processes of rationalization put into practice in recent years on the London Midland and Scottish Railway.

In view of the shortness of Mr. Pope's visit it was decided that he should concentrate his attention on the Great Indian Peninsula Railway and inaugurate a detailed analysis of every important activity of railway operation—" job analysis "—on that line. It was arranged to associate with him certain officers of other railways who could learn his methods and, after his departure from the country, return to their lines to initiate the process on those lines. The following officers were selected for the purpose :—

Mr. J. A. Bell, Divisional Superintendent, East Indian Railway,

Lt.-Col. C. F. Carson, R.E., Divisional Superintendent, North Western Railway,

Mr. R. C. Case, Deputy Transportation Superintendent, Great Indian Peninsula Railway,

Mr. G. S. G. Higginson, District Transportation Officer, Bengal Nagpur Railway,

Mr. G. A. R. Trimming, Deputy Chief Mechanical Engineer, East Indian Railway.

Mr. Pope and these officers worked on the Great Indian Peninsula Railway during the month of January and part of February 1933, and on 25th February presented a report to the Railway Board. In a letter forwarding his report, Mr. Pope pointed out that already a large number of economies had been effected on Indian Railways and there were no big individual economies left except the better use of locomotive power, and possibly a further amalgamation of railways, both of which are referred to in the report. He, however, urged that considerable savings would be found possible if a detailed analysis of every operation conducted on a railway (job analysis) were undertaken and for this purpose constant organised research and investigation were necessary.

In accordance with this recommendation, the officers, associated with Mr. Pope, have returned to their railways and are now carrying on the investi-

Dhansari Bridge, Tangla.

gations recommended by him. Accordingly, at the end of the official year the position was that "job analysis" had been started on the North Western, East Indian, Great Indian Peninsula, Eastern Bengal and the Bengal Nagpur Railways and its introduction on other lines was under contemplation. It must be borne in mind that "job analysis", as the expression itself implies, consists of a closely detailed examination of a large number of small processes and items and, although it may be reasonably hoped that the ultimate results in the aggregate will conclusively repay the expenditure involved, it must be a matter of time before the effect of these results is felt. On the London Midland and Scottish Railway the process has been going on for some years and is still far from complete.

In addition to the specific recommendation that "job analysis" should be initiated on all railways, there are other recommendations in the report which may be summarized as follows:—

(*a*) The better use of locomotives;

(*b*) The better use of railway land;

(*c*) The more careful listing of surplus track, equipment, and accommodation;

(*d*) Additional research and experiments;

(*e*) Improved workshop practice, especially in regard to standardization of pattern design, the use of scrap, and the compilation of "cost" data;

(*f*) Possibility of reducing hot axles.

All these matters are now under active investigation.

13. Labour Disputes.—A strike occurred in certain workshops on the Madras and Southern Mahratta Railway from the 24th October 1932 to the 7th January 1933, particulars of which are given in paragraph 88 of this report, in Chapter VI which deals with staff matters.

CHAPTER II.

FINANCIAL.

I.—*Trade Review*.

14. The universal trade depression continued to be felt with greater intensity in India during the year 1932-33 resulting in a decline in exports of Rs. 25 crores or 15 per cent., as compared with 1931-32. The imports, however, showed an improvement of Rs. 7 crores or 5 per cent.

The total value of exports from British India during the year 1932-33 amounted to Rs. 136 crores and that of imports to Rs. 133 crores.

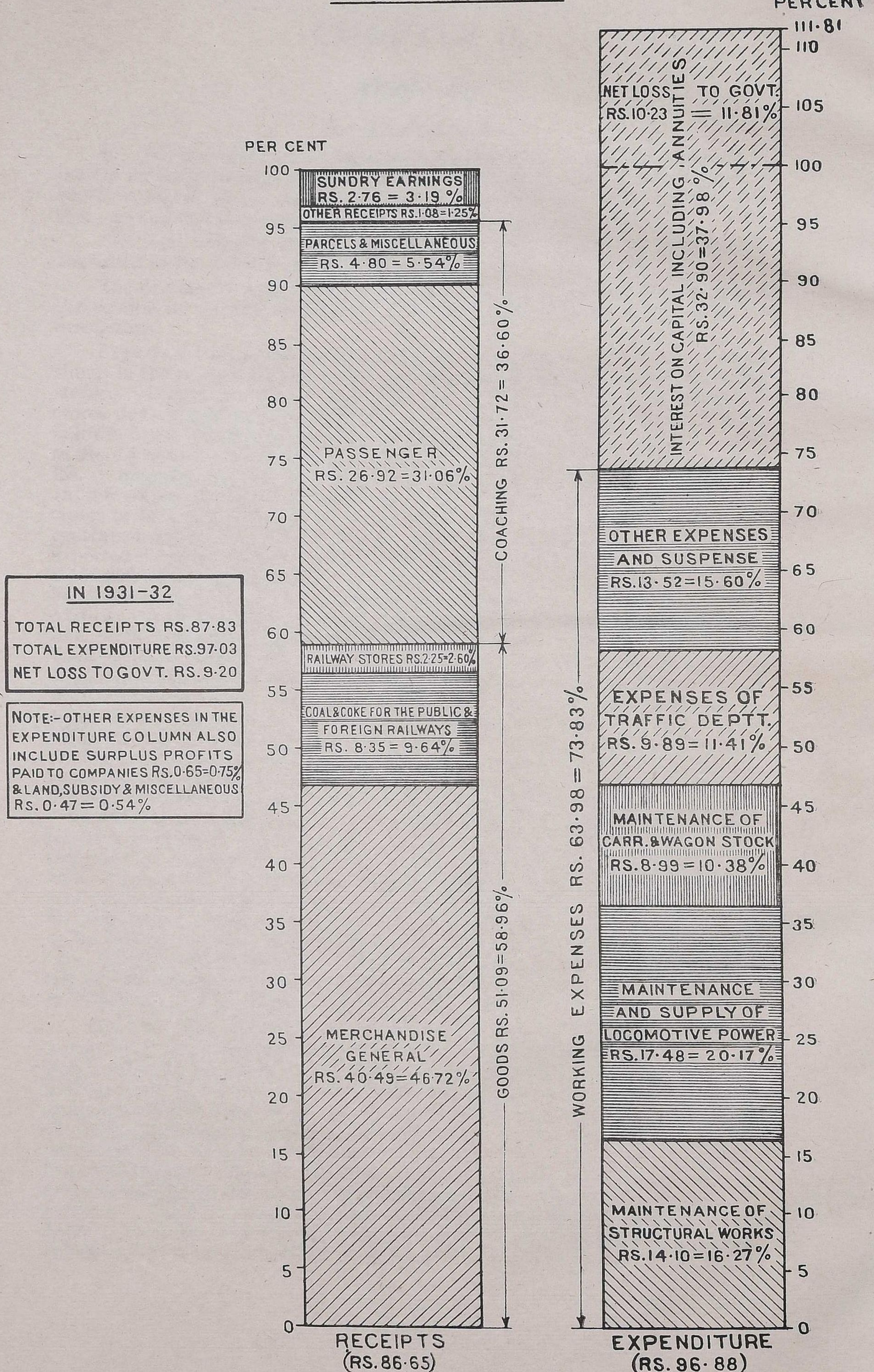
The decline in export traffic was one of the main factors contributing to the decline in railway earnings as compared with 1931-32, a year none too prosperous.

Exports.—The outstanding feature on the export side was a further slump in the raw cotton trade due to comparatively high prices of the Indian staples. Despatches of raw cotton fell from 2,369,000 bales valued at Rs. 23 crores during last year, to 2,063,000 bales valued at Rs. 20 crores. Cotton manufactures (including twist and yarn) were valued at Rs. 3 crores, a decline of Rs. 1½ crores. Twist and yarn receded from 22 million lbs. to 15 million lbs. in quantity and Rs. 128 lakhs to Rs. 79 lakhs in value. Shipments of Indian cotton piecegoods dropped from 104·6 million yards worth Rs. 3·24 crores to 66·4 million yards worth Rs. 2·09 crores. The decline under jute continued during the year and the value of raw and manufactured jute exported declined by Rs. 2 crores. Raw jute declined from 3,285,000 to 3,153,000 bales and from Rs. 11·19 crores to Rs. 9·73 crores in value. Gunny bags, however, advanced from 389 millions valued at Rs. 10·94 crores to 415 millions valued at Rs. 11·16 crores, while gunny cloth shrank from 1,021 million yards worth Rs. 10·45 crores to 1,012 million yards worth Rs. 10·24 crores. Food grains declined from Rs. 20·37 to 16·08 crores in value and the quantity from 2,614,000 to 2,056,000 tons. Wheat, which amounted to 20,000 tons in 1931-32, fell by 2,000 tons in 1932-33. Rice dropped from 2,372,000 to 1,887,000 tons in quantity and from Rs. 18·14 to 14·46 crores in value. Oilseeds amounted to 733,000 tons valued at Rs. 11·31 crores showing a decline of 26 per cent. in quantity and 22 per cent. in value, as compared with the preceding year; this was very marked under groundnut which declined from 672,000 to 433,000 tons, linseed from 120,000 to 72,000 tons and castor seed from 104,000 to 86,000 tons, owing to a falling off in the demand. Rapeseed, however, recorded an improvement of 61,000 tons valued at Rs. 80 lakhs. Tea improved in quantity from 342 to 379 million lbs. but on account of the low level of prices the value declined from Rs. 19·44 to 17·15 crores; metals and ores declined from 829,000 tons worth Rs. 5·47 crores to 695,000 tons worth Rs. 4·68 crores. Hides and skins declined from 49,300 to 41,700 tons, valued at Rs. 8·92 to 7·43 crores respectively. Exports of lac amounted to 418,300 cwts. valued at Rs. 1·24 crores, representing a decline of 10 per cent. in quantity and 33 per cent. in value as compared with the previous year. Coffee rose by 18,000 cwts. in quantity and Rs. 15 lakhs in value.

Imports.—The improvement on the import side in India's demand for foreign textiles contributed to an additional revenue of Rs. 12 crores as compared with Rs. 35 crores in 1931-32 or an increase of 34 per cent. over the previous year and 13 per cent. over 1930-31. This advance under the textile group was mainly due to larger imports of cotton piecegoods, the total receipts of which amounted to 1,225 million yards valued at Rs. 21·26 crores as compared with 776 million yards valued at Rs. 14·67 crores in 1931-32. The other principal varieties of cotton piecegoods also contributed to this improvement, greys increasing by 107, whites by 133, and coloured by 202 million yards respectively. These increases were shared chiefly by the United Kingdom and Japan. Arrivals of cotton twist and yarn also rose from 31·6 million lbs. valued at 2·99 crores in 1931-32 to 45·1 million lbs. valued at Rs. 3·79 crores.

RECEIPTS AND EXPENDITURE OF STATE OWNED RAILWAYS IN INDIA 1932-33.

FIGURES IN CRORES.



There were also advances in the other important items included in the textile group, notably under silk raw and manufactured, of Rs. 1·59 crores, wool and woollens Rs. 1·34 crores and artificial silk, pure and mixed varieties, Rs. 72 lakhs. The imports of raw cotton rose from 79,000 in 1931-32 to 85,000 tons, due to increased spinning of finer-yarn in the local mills. There was decline of only Rs. 5 lakhs under metals. In quantity the imports of iron and steel fell from 371,000 to 326,000 tons and in value from Rs. 6·32 crores in 1931-32 to 5·30 crores. Machinery and millwork marked a decline of Rs. 38 lakhs, although sugar and textile machinery recorded increases and the value of hardware imported advanced from Rs. 2·61 to 2·99 crores. A further diminution from Rs. 2·89 to 2·43 crores occurred under motor vehicles, the number of motor cars imported having fallen from 7,220 to 6,201 and that of omnibuses from 4,302 to 2,676. Consequently the value of rubber manufactures imported also declined from Rs. 2·21 to 1·98 crores. Owing to increased local production, foreign sugar of all kinds fell from 556,000 tons valued at Rs. 6·16 crores to 401,000 tons valued at Rs. 4·23 crores. Mineral oils also declined from 217 to 188 million gallons in quantity and Rs. 9·04 to 6·70 crores in value. Kerosene oil declined from 85·7 to 59·5 million gallons but fuel oils advanced from 100·8 to 104·5 million gallons. The value of provisions also contracted from 3·41 to 2·93 crores, chiefly due to a falling off in the values of vegetable products, condensed milk and farinaceous foods. Owing to unfavourable price parity, the arrivals of wheat fell from 111,300 tons to 33,500 tons in quantity and Rs. 73 to 29 lakhs in value. Paper and pasteboard, however, recorded an improvement of 449,000 cwts. valued at Rs. 36 lakhs.

Balance of trade.—The visible balance of trade in merchandise and treasure for the year 1932-33 was in favour of India to the extent of Rs. 68 crores as compared with 90 crores in 1931-32.

II.—*Financial Results of State Railways.*

15. Financial results of working.—The financial results of the working of Indian State-owned Railways for 1932-33 were summarised in a memorandum prepared for the Public Accounts Committee by the Chief Commissioner and Financial Commissioner of Railways in September 1933. The figures available then were not in their final form and it was pointed out that there might be certain accounts adjustments which may alter them ultimately, though not to a large extent. Relevant paragraphs from the memorandum (after making the small corrections that were necessary in the figures) are reproduced below.

Stated briefly the position in 1932-33 was as follows:—

Gross receipts amounted to 84½ crores, or 2 crores less than in the previous year. Working expenses, including the usual appropriation for depreciation, amounted to 61½ crores—about 1¼ crores less than in the previous year. The net receipts of 23 crores, or 1 crore less than in 1931-32, were insufficient to meet interest charges. The deficit of 10 crores was, as in the previous year, borrowed from the accumulated balances of the Depreciation Fund.

The ordinary working expenses, excluding depreciation, amounted to nearly 48 crores, or 1½ crores less than in the preceding year. The decrease in working expenses made up for over two-thirds of the fall in receipts. A large part of this decrease was due to the operation of the cut in pay in force throughout the year whereas it was in force only during the last 4 months in the previous year.

The last good year for Indian railways was 1929-30, and it may be of interest to compare the results of 1932-33 with those of that year. In making the comparison, however, it must not be overlooked that the Southern Punjab Railway was purchased in January 1930, and that, if it had formed part of the State-owned system for all the twelve months of that year instead of only for the last three, the earnings of 1929-30 would have been increased to about 104 crores and the ordinary working expenses to about 56¼ crores. Making due allowance for this, the receipts in 1932-33 may be stated to be about 19½

crores (19 per cent.) below the receipts of 1929-30, and the ordinary working expenses about 8½ crores (15 per cent.) below the working expenses of 1929-30. To put it in another way, Indian railways have made up by savings in working expenses about 45 per cent. of the loss in gross receipts as compared with 1929-30.

The appropriation to the depreciation fund during the year amounted to 13¾ crores and the amount withdrawn to 6½ crores, so that the net accretion to the fund during the year was 7¼ crores. The balance at the end of the year was 12 crores. It would have been 26 crores but for the temporary borrowings in the two years 1931-32 and 1932-33 to meet deficits

The capital expenditure during the year including both the expenditure on new constructions, on which half a crore was spent, entirely on completion of works started in earlier years, and on improvements of the open line, was fully counterbalanced by a reduction of stores balances to the extent of 1½ crores, and by writing down capital by debit to the depreciation fund on account of retired assets.

Stores balances on all railways were reduced from 13½ crores to 12 crores, which constitutes a new record. The balance at the end of 1932-33 is only about half of the balance ten years earlier.

A true picture can be obtained of the present only by a comparison with the past, and the year 1924-25, when the railway budget was separated from the general budget of the Government of India and considerable accounting changes, such as the institution of a depreciation fund, were made, is a suitable starting point. The following table compares in a convenient form the results of working of 1932-33 with those of earlier years.

(Figures in lakhs of rupees.)

—	1924-25.	1925-26.	1926-27.	1927-28.	1928-29.	Average for 5 years 1924-25 to 1928-29	1929-30.	1930-31.	1931-32.	1932-33.
	M.	M.	M.	M.	M.	M.	M.	M.	M.	M
Mileage open	*27,324*	*27,430*	*28,004*	*28,426*	*29,451*	***28,127***	*31,218*	*31,489*	*31,709*	***31,892***
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs	Rs.	Rs.	Rs.	Rs.
Gross traffic receipts	1,00,13	98,94	98,42	1,03,43	1,03,72	**1,00,93**	1,02,70	95,10	86,63	**84,43†**
Ordinary operating expenses	51,65	52,99	52,89	53,06	54,21	**52,96**	55,59	54,39*	49,31	**47,89†**
Appropriation to Depreciation Fund	10,35	10,67	10,89	11,38	12,00	**11,06**	12,59	13,07	13,46	**13,77**
Net Traffic receipts	38,13	35,28	34,64	38,99	37,51	**36,91**	34,52	27,64	23,86	**22,77**
Net miscellaneous charges (including surplus profits payable to Companies) after deducting miscellaneous receipts.	1,07	1,19	1,27	87	37	**95**	2	11	—1	**9**
Net revenues	37,06	34,09	33,37	38,12	37,14	**35,96**	34,50	27,53	23,87	**22,68**
Interest charges	23,90	24,81	25,87	27,27	29,33	**26,24**	30,46	32,72	33,07	**32,91**
Surplus	13,16	9,28	7,50	10,85	7,81	**9,72**	4,04	—5,19	—9,20	**—10,23**
Paid as contribution to general revenues	6,78	5,49	6,01	6,28	5,23	**5,96**	6,12	5,74	..	..
Transferred to railway reserve	6,38	3,79	1,49	4,57	2,58	**3,76**	—2,08	—10,93	—4,95	..
Borrowed temporarily from depreciation fund.	..	..	..	..	..	..	..	..	4,25	**10,23**

* Inclusive of a credit of 166 lakhs from the depreciation fund to correct past erroneous adjustments.

† For purposes of comparison with previous years the change in accounting procedure introduced in 1932-33, by which credits for material released from works not charged to revenue are shown as gross receipts instead of as a reduction of working expenses, has been neglected.

Of the nine years that have elapsed since the separation of railway revenues from the general revenues of India, the first six were prosperous years. After paying interest charges, and putting by a net sum of 12 crores in the Depreciation Fund after meeting such of the expenditure on renewals and replacements as is chargeable, under rules, to the Fund the total surpluses amounted to 52½ crores. During the next three years, the position was very different. There were deficits amounting to 24½ crores, though at the same time the balance in the Depreciation Fund increased by 14 crores.

In other words, the net result of working of the Indian State-owned Railways during the nine years 1924-25 to 1932-33 inclusive was a surplus of 28 crores, and an accumulated balance in the Depreciation Fund of 26 crores.

Under the separation convention, railways were liable to make a contribution to general revenues which amounted on the average to a net payment of 6 crores a year. They were able to make this payment from current surpluses in the first five years; in the sixth year, partly from the surplus of the year and partly from accumulated reserves, and in the seventh year wholly from the latter; thereafter, they have not been able to pay any contribution. The total amounts paid during the period were 42 crores. As the surplus during the period was only 28 crores, the balance of 14 crores had to be borrowed. A temporary loan was, therefore, taken of that amount from the Depreciation Fund, the actual balance of which at the end of 1932-33 was thus reduced to 12 crores.

The net traffic receipts of about 23 crores in 1932-33 amounted to less than 3 per cent. of the capital at charge. This result was the worst experienced since the separation.

(Figures in crores.)

—	Net receipts.	Percentage of capital at charge.	Net profit or loss after paying Interest charges.
	Rs.		Rs.
Average of 5 years, 1924-25 to 1928-29	36·91	5·5	9·72
1929-30	34·52	4·6	4·04
1930-31	27·64	3·6	—5·19
1931-32	23·86	3·0	—9·20
1932-33	**22·77**	**2·9**	**—10·23**

The operating ratio on all State-owned Railways (*i.e.*, the ratio of ordinary working expenses to gross earnings) amounted to 57 per cent. excluding depreciation, and to 73 per cent. including depreciation. These ratios are practically the same as in the previous year. In the table below, the ratios in earlier years are given for purposes of comparison.

—	Percentage, excluding depreciation.	Percentage, including depreciation.
Average of 5 years, 1924-25 to 1928-29	52½	63½
1929-30	54	66
1930-31	59	73
1931-32	57	73
1932-33	**57**	**73**

Figures that are available for certain foreign railways are given below for purposes of comparison. These show that bad as is the plight of Indian railways at present they are better off than most others.

The gross receipts of the 4 amalgamated British Railways in 1932 amounted to £165 million and were £15 million (8 per cent.) less than in 1931 and £42½ million (21 per cent.) less than in 1929. Their working expenses which amounted to £141 million were £8¾ million less than in the previous year and £27 million less than in 1929. The operating ratio rose from 81 per cent. in 1929 to 83 per cent. in 1931 and 85½ per cent. in 1932.

The Canadian Pacific Railway earned 124 million dollars in 1932, 18 million (13 per cent.) dollars less than in the previous year and 86 (40 per

cent.) million dollars less than in 1929. Their working expenses were 104 million dollars, 12 million dollars less than in 1931 and 63 million dollars less than in 1929. The operating ratio rose from 79½ per cent. in 1929 to 82 per cent. in 1931 and 84 per cent. in 1932.

The Canadian National Railways realised 161 million dollars in 1932, *i.e.*, 39 million dollars (19 per cent.) less than in 1931 and 107 million dollars (40 per cent.) less than in 1929. Their working expenses fell to 155 million dollars in 1932, by 44 million dollars (22 per cent.) as compared with the previous year and 66 million dollars (30 per cent.) as compared with 1929. Their operating ratio was 82½ per cent. in 1929, and rose to 99½ per cent. in 1931 but fell to 96 per cent. in 1932.

The receipts of the principal railways of the United States of America were 3,160 million dollars in 1932. This was 25 per cent. less than in 1931 and 50 per cent. less than in 1929. The working expenses which were 2,430 million dollars were over 25 per cent. less than in the previous year and about 47 per cent. below the figures for 1929. The operating ratio in 1932 was 77 per cent. It was the same in the previous year but was only 72 per cent. in 1929.

For the German State Railways, 1932 was a disastrous year—their expenses exceeded their earnings and the operating ratio was 102 per cent. The earnings fell by nearly 24 per cent. as compared with the previous year and by 36 per cent. as compared with 1930. Their working expenses fell by 17 per cent. as compared with the previous year and by 26 per cent. as compared with 1930.

16. *Gross Receipts.*—The following table compares the receipts in detail with the previous years :—

(Crores of rupees.)

—	1929-30.	1930-31.	1931-32.	**1932-33.**
Passenger earnings	35·75	31·68	28·96	**28·94**
Other coaching earnings	5·81	5·40	5·27	**5·03**
Goods earnings	65·25	60·69	55·41	**53·76**
Sundry earnings	2·21	1·97	1·82	**1·63**
Suspense	0·30	0·46	0·35	**0·04**
TOTAL	1,09·32	1,00·20	91·81	**89·40**
Less				
Refunds	0·15	0·11	0·11	**9·11**
Earnings of worked lines	6·47	4·99	5·07	**4·86**
NET	1,02·70	95·10	86·63	**84·43**

It will be observed that passenger earnings have fallen about 19 per cent. and the goods earnings about 17½ per cent. as compared with 1929-30. As compared with 1931-32 the passenger earnings are about the same while goods earnings have fallen about 3 per cent.

The earnings in 1932-33 amounted to about Rs. 26,400 per open mile, against Rs. 32,900 per open mile in 1929-30, a drop of nearly 20 per cent.

Though the percentage fall in goods earnings during 1932-33 as compared with the previous year is comparatively slight, being only 3 per cent., the variations in individual commodities were surprisingly large. There were increases in certain commodities, mainly under cotton, raw and manu-

factured, iron and steel wrought, raw jute and jagree and molasses, of about 10 per cent. or over. On the other hand there were heavy decreases in oil seeds, food grains including rice and wheat, sugar and kerosine and petrol. The decrease under oil seeds was nearly 20 per cent. while that under food grains on the whole was over 10 per cent.

It is interesting to compare the figures of earnings from goods traffic on Class I railways with the figures in previous years, notably 1929-30. The figures for the more important commodities are given below :—

(Figures in lakhs.)

—	1929-30.	1930-31.	1931-32.	1932-33.
	Rs.	Rs.	Rs.	Rs.
Cotton, raw and manufactured	6,91	6,31	4,76	5,19
Fuel for public and foreign railways	10,22	9,56	8,83	8,90
Metallic ores	1,47	93	58	45
Rice	4,17	3,67	3,71	3,45
Wheat	2,03	2,69	2,16	1,84
Gram, pulse and other grains	3,53	3,42	3,58	3,09
Iron and steel	2,46	2,07	1,81	2,00
Kerosine	1,69	1,50	1,62	1,38
Jute	1,47	1,36	99	1,12
Sugar	2,03	2,03	1,51	1,30
Oil seeds	3,95	4,01	3,52	2,88
Gur, jagree and molasses	94	98	1,27	1,39

As compared with 1929-30, the large decreases of 172 lakhs (25 per cent.) under cotton raw and manufactured, of 102 lakhs (70 per cent.) under metallic ores, of 107 lakhs (27 per cent.) under oil seeds and of 73 lakhs (36 per cent.) under sugar deserve special notice. The last is however counterbalanced by a large increase under gur, jagree and molasses—and taking sugar along with these, the total is only 28 lakhs or less than 10 per cent. below 1929-30.

The statement below compares the receipts of individual railways in 1932-33 with previous years.

(Figures in lakhs.)

Railways.	1929-30.	1930-31.	1931-32.	1932-33.
	Rs.	Rs.	Rs.	Rs.
Assam Bengal	2,05	1,96	1,84	1,56
Bengal Nagpur	9,31	8,17	7,24	6,91
Bombay, Baroda and Central India	11,52	10,90	10,30	10,17
Burma	4,87	4,28	3,74	3,33
Eastern Bengal	6,73	5,86	5,05	4,91
East Indian	19,85	18,24	17,36	17,27
Great Indian Peninsula	14,58	13,33	11,92	11,94
Madras and Southern Mahratta	8,98	7,98	7,15	6,66
North Western (Comm.)	14,39	14,98	13,34	12,74
North Western (Strategic)	1,59	1,48	1,31	1,23
South Indian	6,33	5,80	5,30	5,51
Other Railways	2,50	2,12	2,08	2,20

The railways which showed a large falling off in receipts in 1932-33 as compared with the previous year are mainly the following :—

Railway.	Decrease as compared with previous year (lakhs).	Percentage.	Remarks.
	Rs.		
Assam Bengal . .	28	15	Heavy loss in passenger earnings (7 lakhs) and fall in rice traffic (7 lakhs).
Bengal Nagpur . .	33	5	Heavy loss (8 lakhs) in passenger earnings; fall in manganese traffic (6 lakhs) reduced traffic in coal carried for foreign railways (13lakhs).
Burma Railways . .	41	11	Mainly under rice (30 lakhs) due to a fall in prices and decreased production.
Madras and Southern Mahratta.	49	7	Mainly under oil seeds (37 lakhs) due to less exports abroad.
North Western (commercial).	60	5	Mainly under wheat (25 lakhs) sugar (15 lakhs) and oil seeds (10 lakhs).

The only two important railways which showed any increase in receipts were the Bengal and North-Western Railway where there was a considerable increase in traffic due to the construction of new sugar mills and increased production therein, and the Great Indian Peninsula Railway where the increase was mainly due to a better cotton crop. The increase in the South Indian Railway is due to certain accounts adjustments. Neglecting these, the receipts show a small falling off as compared with the previous year.

17. *Working expenses.*—In making a comparison of working expenses in previous years, allowance has to be made for certain important special factors that have to be taken into account, *viz.* :—

(*a*) In 1929-30 and 1930-31 the figures include the proportion of the share of working expenses of the Mysore State Railways while in 1931-32 and 1932-33 they do not include it. We should therefore decrease the figures of the first two years by about 24 lakhs.

(*b*) In 1929-30 the working expenses of the Southern Punjab Railway are included only for 3 months while in the following three years they are included for all the 12 months. We should therefore increase the figure for 1929-30 by about ½ crore.

(*c*) Certain arrear adjustments with the depreciation fund to correct past erroneous transactions decreased the working expenses of 1930-31 by 166 lakhs and increased those of 1931-32 and 1932-33 by 9 lakhs and 6 lakhs respectively.

(*d*) In 1932-33 a special payment of 20 lakhs was made to the Income-tax Department as representing the value of the exemption allowed to railway staff from the additional income-tax imposed in 1931. This should be omitted for comparative purposes.

(*e*) In 1931-32 and 1932-33 the amounts recovered on account of the emergency deductions from pay amounted to 58 lakhs and 193 lakhs respectively.

(*f*) In 1932-33 the working expenses were increased by 20 lakhs on account of certain arrear adjustments on the South Indian Railway where some lines recently constructed had previously been treated as worked lines instead of as integral parts of the undertaking.

Making allowance for all these factors, the comparable figures are as follows :—

	Rs.	
1929-30	55·92	crores.
1930-31	55·81	,,
1931-32	49·80	,,
1932-33	**49·36**	,,

The reduction in working expenses, apart from the emergency deductions in pay, amounted to nearly half a crore as compared with the past year but was about 6½ crores as compared with 1929-30. Including these deductions the reduction of working expenses as compared with 1929-30 was about 8½ crores, or over 15 per cent.

A comparison of the ordinary working expenses of each railway with previous years will be found below. It is enough to say here that there was a decrease in practically every railway. The only apparent exception is the South Indian Railway where there is shown an increase of 12 lakhs; but this result is due to the arrear adjustments referred to earlier in this paragraph which increased the expenditure by 20 lakhs. Taking this into account, there is a saving of 8 lakhs.

(Figures in lakhs.)

Railways.	1929-30.	1930-31.	1931-32.	**1932-33.**
	Rs.	Rs.	Rs.	**Rs.**
Assam Bengal	1,13	1,12	1,09	**1,02**
Bengal Nagpur	5,51	5,36	4,83	**4,77**
Bombay, Baroda and Central India	6,07	6,14	5,47	**5,39**
Burma	2,57	2,61	2,33	**2,05**
Eastern Bengal	3,84	3,74	3,29	**3,17**
East Indian	10,21	9,95	9,02	**8,88**
Great Indian Peninsula	8,37	8,57	7,13	**7,07**
Madras and Southern Mahratta	3,95	3,88	3,33	**3,16**
North Western (Commercial)	8,47	9,03	7,74	**7,23**
North Western (Strategic)	1,68	1,76	1,38	**1,42**
South Indian	2,79	2,87	2,63	**2,79**
Other Railways	1,00	1,02	98	**94**

18. *Net receipts.*—The details of net receipts (after meeting the appropriation to the Depreciation Fund, which represents expenditure not controllable by the railway administration) are given below. It will be noticed that the East Indian, Great Indian Peninsula and the South Indian Railways are better than last year; the Eastern Bengal and the Bombay, Baroda and Central India Railways are about the same, whereas the Assam Bengal, Bengal Nagpur, Burma, Madras and Southern Mahratta and North Western Railways are appreciably worse.

(Figures in lakhs.)

Railways.	1929-30.	1930-31.	1931-32.	**1932-33.**
	Rs.	Rs.	Rs.	**Rs.**
Assam Bengal	65	54	44	**22**
Bengal Nagpur	2,56	1,49	1,07	**75**
Bombay, Baroda and Central India	4,12	3,43	3,45	**3,40**
Burma	1,82	1,15	88	**75**
Eastern Bengal	2,02	1,20	80	**76**
East Indian	7,43	6,00	5,99	**6,05**
Great Indian Peninsula	4,38	2,87	2,85	**2,89**
Madras and Southern Mahratta	4,13	3,22	2,92	**2,60**
North Western (Commercial)	3,75	3,69	3,27	**3,02**
North Western (Strategic)	—50	—70	—50	**—62**
South Indian	2,89	2,23	1,92	**1,99**
Other Railways	1,27	86	86	**1,02**

19. *Losses and gains.*—During 1932-33 there were only two of the bigger systems that continued to work at a profit, *viz.*, the Bombay, Baroda and Central India Railway, which showed a net gain of 41 lakhs, and the South Indian Railway, which showed a net gain of 6 lakhs. Even the Madras and Southern Mahratta Railway, which showed a profit in the previous year of 14 lakhs, showed a loss of 19 lakhs during the current year.

The net gain or loss of the various railways for the last four years is given below :—

(Figures in lakhs.)

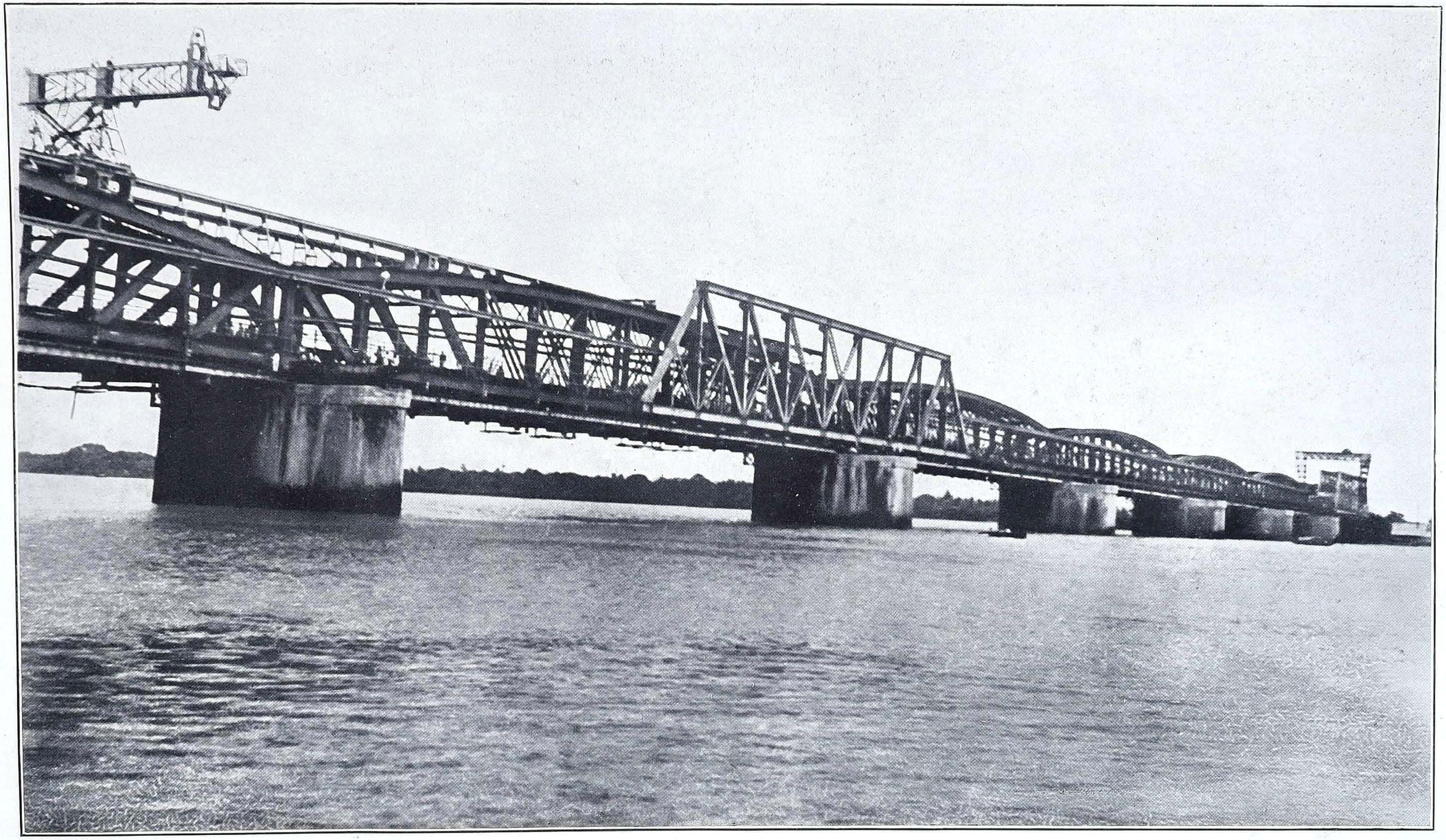
	1929-30.	1930-31.	1931-32.	**1932-33.**
State-managed Railways.				
Burma	+4	—44	—74	**—75**
Eastern Bengal	+16	—80	—1,23	**—1,28**
East Indian	+1,61	—18	—24	**—13**
Great Indian Peninsula	+8	—1,72	—1,78	**—1,68**
North Western (Commercial)	—64	—1,16	—1,58	**—1,78**
North Western (Strategic)	—1,90	—2,18	—1,99	**—2,09**
TOTAL	—65	—6,48	—7,56	**—7,71**
Company-managed Railways.				
Assam Bengal	—24	—39	—52	**—74**
Bengal Nagpur	—66	—1,99	—2,48	**—2,80**
Bombay, Baroda and Central India	+1,25	+43	+45	**+41**
Madras and Southern Mahratta	+89	+1	+14	**—20**
South Indian	+1,19	+31	+1	**+6**
Other Railways	+77	+20	+19	**+25**
TOTAL	+3,20	—1,43	—2,21	**—3,02**

20. *Capital at charge.*—The statement below shows how the capital at charge on all railways in which the State has a financial interest has been growing (for facility of comparison, all sterling liabilities have been converted at 1*s.* 6*d.* the rupee) :—

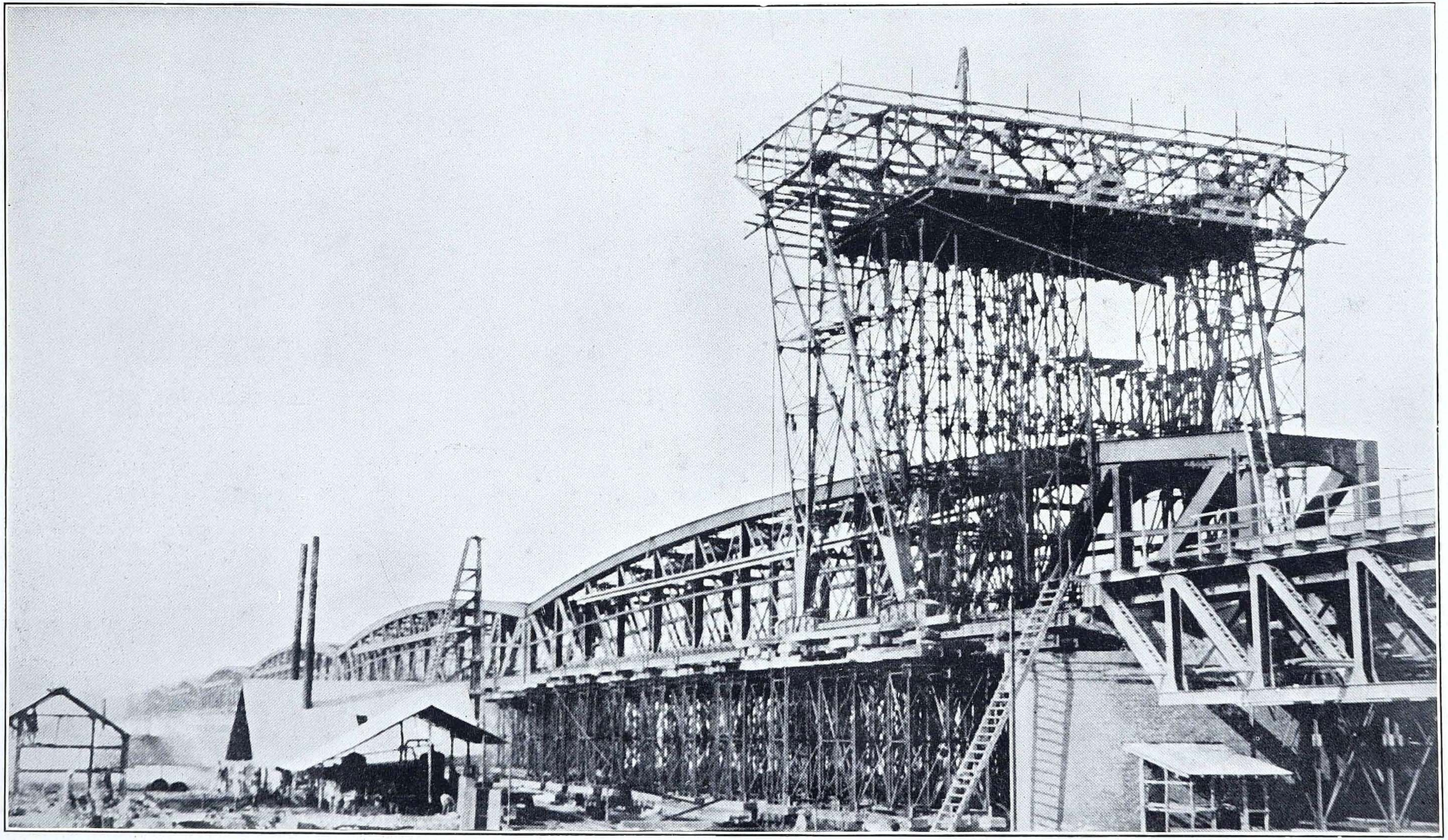
	Crores.
1923-24	621
1924-25	635
1925-26	655
1926-27	682
1927-28	714
1928-29	739
1929-30	770
1930-31	783
1931-32	790
1932-33	**790**

The average increase in the first six years after the separation was nearly 25 crores per annum; the increase in the next three years has been less than 7 crores per annum, and in the last year the capital has remained stationery: the reduction of stores balances and the writing off of capital during the year by debit to depreciation fund counterbalanced the new capital expenditure.

An analysis of the increase of 169 crores in the capital at charge in the nine years from the separation may be of general interest. The expenditure on new lines during the period amounted to 48 crores; 16 crores were devoted to the purchase of existing railways (*viz.*, the Delhi-Umballa-Kalka Railway,



Doubling of Rupnarain Bridge, Howrah Khargpur Section: General view showing the old bridge, with the outer girder for the Nagpur End Span.



Doubling of Rupnarain Bridge, Howrah Khargpur Section: View showing steel staging on piled foundations at first 300 feet bay.

the Burma Railways, and the Southern Punjab Railway), and the balance of over 100 crores was spent on the improvement of open line facilities.

Taking the last three years only, the increase in capital has been 20 crores, of which 7½ crores were for new lines started earlier and 12½ crores for improvements.

21. *Works expenditure.*—The statement below gives the total expenditure on works year by year from 1924-25 showing separately expenditure on new constructions, open line works—capital and depreciation fund separately—and amounts spent on the purchase of railways, etc.

(In lakhs of rupees.)

Years.	New constructions.	Open line works.	Purchase of railways and branch line shares.	Total capital.	Depreciation Fund.	Total works.
1924-25	3,20	10,07	19	13,46	7,29	20,75
1925-26	3,93	15,32	..	19,25	7,98	27,23
1926-27	6,76	16,13	4,34	27,23	8,05	35,28
1927-28	10,26	22,18	4	32,48	10,95	43,43
1928-29	9,28	15,78	4,29	29,35	9,60	38,95
1929-30	6,65	16,44	7,09	30,18	11,76	41,94
1930-31	4,28	8,92	1	13,21	9,74*	22,95*
1931-32	2,79	3,97	..	6,76	8,27	15,03
1932-33	**57**	**—50**	..	**7**	**6,35**	**6,42**

* Excludes debit of 1,66 lakhs for correction of past erroneous adjustments.

In 1932, as in the previous two years, our works programme was cut down to the bone. As we pointed out last year, it became clear to us in the latter part of 1929 that owing to conditions both in India and abroad it was improbable that we would be able to obtain funds for capital expenditure on railways at a reasonable rate of interest. The rise in the rate of interest made us look very carefully therefore into all projects, both of new constructions and of improvements to open lines, for projects which might have been remunerative under ordinary conditions became unremunerative at the high rate of interest prevailing then, and we had to be careful to avoid burdening Railways of India with a large volume of debt raised at a period of high interest rates. The policy was therefore adopted of concentrating almost entirely on pushing schemes already in hand to completion in order to obtain an early return on the money invested, and in 1932-33, as in the two previous years, we avoided the undertaking of new schemes and adding to our commitments at a time when the future was so uncertain. The works carried out were therefore restricted practically entirely to unavoidable and essential improvements.

22. *Stores Balances.*—The total stores balances at the end of 1932-33 amounted to 12 crores—a level below any which has been reached in recent years. A reduction of over 1½ crores was achieved in 1932-33. As compared with 1929-30 the reduction is nearly 5 crores. Special efforts were made by every railway administration to restrict purchases of new material and to utilise as far as possible material already in stock. An extract from the Financial Commissioner's Review of the Appropriation Accounts of 1931-32, which gives fuller details of the position is given below :—

The total balances of stores have been gradually decreasing since 1927-28 when they stood at the high figure of 17⅓ crores. At the end of 1931-32 they had decreased to 13⅔ crores, and it is estimated by 31st March 1933 that they had come down to less than 12 crores. A reduction of 3⅓ crores in the years 1931-32 and 1932-33 deserve notice, though to a certain extent, it is due to the fall in prices and to a general decrease in the volume of railway business. This decrease, however, has also a

contrary effect. An important factor which has considerably retarded the efforts of railways to reduce their balances is the stoppage of new constructions and the curtailment of open line works necessitated by the financial situation which has led to the heavy accumulation of permanent way materials and girders released from renewals of track and bridges and plant and equipment returned from completed or abandoned works which would have otherwise been utilised in new works. The continued trade depression has also restricted the sale by auction of surplus material.

The stores balances at the end of 1931-32, excluding constructions and military reserves which are held entirely to meet emergent military demands and are never used for ordinary railway requirements, amounted to about 47½ per cent. of the issues during the year, 40 per cent. of issues during a particular year is considered normally a suitable figure for closing balances, but a rough and ready formula like this cannot be strictly adhered to in abnormal periods when the requirements of railways are falling so heavily and rapidly.

A prominent feature of the year was a heavy drop both in receipts and issues of stores. Receipts from all sources, including purchases during the year, were reduced to the very low figure of 25¼ crores, which is about three-quarters of the receipts for the previous year. The issues of stores similarly fell to 26¾ crores due to the abnormal reductions of demands as a result of the economy campaign."

The table below gives the figures of stores balances since 1921-22:—

(In thousands.)

Railways.	1921-22.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.	1931-32.	1932-33.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Assam Bengal .	24,81	31,48	18,38	12,30	9,49	12,59	13,01	14,91	18,04	22,05	20,70	15,57
Bengal Nagpur .	1,40,26	1,61,88	1,48,09	1,49,44	1,27,64	1,17,17	1,07,87	1,32,69	1,36,28	1,21,17	1,06,76	1,01,74
Bombay, Baroda and Central India.	2,76,83	2,72,43	2,33,25	1,77,39	1,62,48	1,46,28	1,67,17	1,62,35	1,60,82	1,64,54	1,46,34	1,30,51
Burma . .	66,62	84,85	98,71	84,62	75,00	44,82	59,41	61,25	55,25	52,55	50,83	43,21
Eastern Bengal .	2,51,63	1,76,20	1,57,85	1,21,99	1,12,27	84,07	84,39	79,53	77,21	76,33	68,70	55,47
East Indian (including Oudh and Rohilkhand).	3,92,50	4,39,19	4,10,66	3,14,19	2,81,46	2,48,17	2,98,92	3,14,89	3,03,84	2,48,39	2,27,47	2,08,64
Great Indian Peninsula.	4,66,49	3,88,35	3,97,77	2,89,49	2,38,67	2,23,13	2,53,49	2,41,88	2,62,01	2,51,73	2,18,32	1,79,58
Madras and Southern Mahratta.	1,50,52	1,66,09	1,50,91	1,02,86	84,31	76,75	93,91	83,29	82,60	79,29	76,03	71,80
North Western .	3,94,12	3,92,69	3,79,78	2,73,36	2,44,34	2,86,41	3,91,59	3,69,62	3,47,89	2,59,81	2,27,15	1,84,65
South Indian .	1,14,45	1,38,66	99,02	77,04	1,13,30	1,06,60	1,23,76	1,14,51	1,05,72	93,76	79,72	70,46
Other Railways .	31,08	41,01	42,63	42,59	36,87	39,33	46,55	43,75	52,69	57,14	52,42	46,81
Strategic lines .	57,76	57,68	72,10	63,38	82,62	83,53	92,34	90,17	92,45	93,76	90,89	1,01,90
TOTAL .	23,67,07	23,50,51	22,09,15	17,08,65	15,68,45	14,68,85	17,32,41	17,08,84	16,94,80	15,20,52	13,65,33	12,10,34

23. *Cost of repairs of rolling stock.*—The figures of unit cost of repairs and maintenance of rolling stock are given below for the three years ending 1932-33 :—

—		1930-31.	1931-32.	1932-33.
		Rs.	Rs.	Rs.
Average cost of a standard first class repair of locomotives in mechanical workshops.	Broad gauge	12,050	10,700	**10,700**
	Metre gauge	13,759	11,700	**11,400**
Average cost of a standard first class repair of passenger carriages.	Braod gauge	658	625	**632**
	Metre gauge	390	384	**455**
Average cost of a standard first class repair of wagons	Broad gauge	155	150	**155**
	Metre gauge	125	126	**125**

The average cost for all kinds of rolling stock taking the cost of mechanical workshops and transportation workshops together compares as follows with the past two years :—

—		1930-31.	1931-32.	1932-33.
		As.	As.	As.
Cost of locomotive repairs per equated engine mile	Broad gauge	3·54	3·23	**3·10**
	Metre gauge	3·78	3·39	**3·48**
		Rs.	Rs.	Rs.
Cost per carriage on line	Broad gauge	724·7	598·2	**597·1**
	Metre gauge	342·1	289·4	**299·6**
Cost per wagon on line	Broad gauge	123·9	92·6	**95·2**
	Metre gauge	57·5	48·1	**44·5**

In certain cases it will be noticed that the average cost has increased in 1932-33 as compared with the previous year. To a certain extent this is due to the fact that Railways have in general extended the interval between heavy repairs and, to keep the total cost of repairs and maintenance down, have attempted to postpone repairs as far as possible with the consequence that when the repairs are actually undertaken the cost of an individual repair is more. The increase in the average cost of a standard first class repair of passenger carriages in the metre gauge is however very high and is under investigation at present.

24. *Contribution to General Revenues.*—The contribution to General Revenues due for the year 1932-33 amounts to Rs. 523 lakhs or 13 lakhs less than in 1931-32. The payment of the contribution has been held in abeyance until the return of prosperous years. The statement below shows how the amount is arrived at :—

(Based on actuals of penultimate year 1930-31.)

	(Figures in thousands.) Rs.	Rs.
1. 1 per cent. on capital of Rs. 7,35,94,90 at charge—commercial lines—to end of 1930-31	...	7,35,95
2. (i) Receipts (1930-31)—		
Gross traffic receipts—commercial lines	93,62,17	
Subsidized companies—share of surplus profits	20,36	
Interest on depreciation and reserve fund balances and dividends on investments in branch lines and miscellaneous receipts	1,47,78	
Total Receipts		95,30,31
(ii) Charges (1930-31)—		
Working expenses—commercial lines	65,26,89	
Indian States and railway companies' share of surplus profits	1,16,30	
Land and subsidy	5,90	

2. (ii) Charges (1930-31)—*contd.*	Rs.	
Interest—		
On capital at charge—commercial lines . .	29,87,05	
On capital contributed by Indian States and companies	1,37,59	
Miscellaneous railway expenditure	61,99	
Contribution at 1 per cent. on capital at charge—commercial lines	7,35,95	
Total Charges .		1,05,71,67
(iii) Deficit		10,41,36
(iv) Contribution of 1/5th of surplus		...
3. Total contribution from railway revenues 1 *plus* 2 (iv) .		7,35,95
Deduct—Loss on strategic lines—		
(i) Interest on capital	1,46,91	
(ii) Miscellaneous railway expenditure . . .	69	
(iii) Loss in working	65,77	
		2,13,37
4. Net payment due from railway to general revenues in 1932-33		5,22,58

25. *Depreciation Fund.*—The amount appropriated to the depreciation fund by debit to the working expenses of State-owned railways and the amount drawn from the fund to meet the expenditure incurred on replacement and renewals actually carried out on those railways during 1931-32 and 1932-33 are given in the statement below :—

(Figures in thousands.)

Railways.	Credits to Depreciation Fund by debit to Revenue on account of depreciation in 1931-32.	Amount spent on Replacements and Renewals and charged to Depreciation Fund in 1931-32.	Credits to Depreciation Fund by debit to Revenue on account of depreciation in 1932-33.	Amount spent on Replacements and Renewals and charged to Depreciation Fund in 1932-33.
	Rs.	Rs.	Rs.	Rs.
State Lines managed by State.				
North Western	2,76,44	1,59,48	2,92,37	1,83,14
Eastern Bengal	95,95	82,78	97,68	39,31
East Indian	2,35,19	1,37,42	2,35,38	96,05
Great Indian Peninsula . . .	1,94,38	99,57	1,97,94	79,13
Burma	52,64	24,64	53,44	46,58
Aden	..	—1,11	..	..
State Lines managed by Companies.				
Bengal Nagpur	1,34,03	1,28,33	1,38,85	30,45
Bombay, Baroda and Central India .	1,37,95	70,27	1,38,74	52,23
Madras and Southern Mahratta .	89,67	63,64	90,89	55,07
South Indian	75,27	42,75	77,20	35,64
Other Railways	54,82	27,72	54,73	23,33
Adjustments :—				
1. Net result of adjustment of credits on account of released materials and expenditure on non-wasting assets of company worked Railways under Repairs and Maintenance.	..	—9,01	..	—6,23
TOTAL .	13,46,34	8,26,48	13,77,22	6,34,70

26. An analysis of the financial results of the working of the railways owned by the State is given in the following statement, for the last three years, by each railway :—

(Figures in thousands of rupees.)

Railways.	Year	(d) Capital at charge.	*Deduct* amount of capital contributed by Companies and Indian States.	Net Government Capital at charge.	Receipts.	Working Expenses including Depreciation.	Net Receipts.	Percentage of Net Receipts on Capital at charge.	Charge against net Revenue Receipts. Payment on account of share of Surplus Profits.	Charge against net Revenue Receipts. Interest Annuity and Sinking Fund charges.	Gain.	Loss.
1	2	3	4	5	6	7	8	9	10	11	12	13
State Lines managed by State.												
	1930-31	1,47,84,94	..	1,47,84,94	16,45,45	13,47,21	2,98,24	2·0	..	6,32,13	..	3,33,89
North Western	1931-32	1,48,36,74	..	1,48,36,74	14,65,19	11,88,59	2,76,60	1·9	..	6,33,68	..	3,57,08
	1932-33	**1,48,04,40**	..	**1,48,04,40**	**14,14,63**	**11,75,20**	**2,39,43**	**1·6**	..	**6,26,24**	..	**3,86,81**
	1930-31	50,82,12	..	50,82,12	5,86,00	4,65,73	1,20,27	2·4	..	1,99,86	..	79,59
Eastern Bengal	1931-32	51,34,71	..	51,34,71	5,05,07	4,24,66	80,41	1·6	..	2,03,33	..	1,22,92
	1932-33	**51,38,86**	..	**51,38,86**	**4,98,11**	**4,21,81**	**76,30**	**1·5**	..	**2,03,84**	..	**1,27,54**
	1930-31	1,45,62,28	59,96	1,45,02,32	18,24,30	12,24,40	5,99,90	4·1	..	6,17,61	..	17,71
East Indian	1931-32	1,47,23,75	1,12,14	1,46,11,61	17,35,65	11,37,18	5,98,47	4·1	..	6,22,33	..	23,86
	1932-33	**1,45,49,13**	**1,12,14**	**1,44,36,99**	**17,56,01**	**11,51,75**	**6,04,26**	**4·1**	..	**6,17,37**	..	**13,11**
	1930-31	1,17,25,56	..	1,17,25,56	13,33,36	10,45,78	2,87,58	2·5	..	4,59,81	..	1,72,23
Great Indian Peninsula	1931-32	1,17,87,89	..	1,17,87,89	11,92,31	9,06,71	2,85,60	2·4	..	4,63,35	..	1,77,75
	1932-33	**1,22,92,13**	..	**1,22,92,13**	**12,08,49**	**9,18,84**	**2,89,65**	**2·4**	..	**4,58,05**	..	**1,68,40**
	1930-31	35,31,28	..	35,31,28	4,27,81	3,12,60	1,15,21	3·3	..	1,58,96	..	43,75
Burma	1931-32	35,80,36	..	35,80,36	3,73,84	2,86,46	87,38	2·4	..	1,60,96	..	73,58
	1932-33	**35,05,52**	..	**35,05,52**	**3,49,05**	**2,73,92**	**75,13**	**2·1**	..	**1,50,58**	..	**75,45**
State Lines managed by Companies.												
	1930-31	75,75,58	10,53,13	65,22,45	8,17,01	6,67,25	1,49,76	2·0	..	3,48,78	..	1,99,02
Bengal Nagpur	1931-32	76,77,25	10,53,13	66,24,12	7,23,67	6,17,45	1,06,22	1·4	..	3,54,63	..	2,48,41
	1932-33	**76,99,05**	**10,32,47**	**66,66,58**	**7,02,99**	**6,28,14**	**74,85**	**1·0**	..	**3,54,56**	..	**2,79,71**

(Figures in thousands of rupees.)

Railways.	Year.	(d) Capital at charge.	*Deduct* amount of capital contributed by Companies and Indian States.	Net Government Capital at charge.	Receipts.	Working Expenses including Depreciation.	Net Receipts.	Percentage of Net Receipts on Capital at charge.	Charge against net Revenue Receipts. Payment on account of share of Surplus Profits.	Charge against net Revenue Receipts. Interest Annuity and Sinking Fund charges.	Gain.	Loss.
1	2	3	4	5	6	7	8	9	10	11	12	13
State Lines managed by Companies—contd.												
Bombay, Baroda and Central India	1930-31	72,83,64	2,49,00†	70,34,64	10,89,60	7,47,22	3,42,38	4·7	15,00‡	2,84,30	43,08	..
	1931-32	73,60,14	5,50,86†	68,09,28	10,29,70	6,85,50	3,44,20‡	4·7	11,34‡	2,87,79	45,07	..
	1932-33	**75,77,98**	**5,50,85†**	**70,27,13**	**10,22,95**	**6,82,79**	**3,40,16**	**4·5**	**12,60‡**	**2,86,91**	**40,65**	..
Madras and Southern Mahratta	1930-31	53,81,44	10,07,08	43,74,36	7,98,20	4,75,88	3,22,32	6·0	79,57‡	2,41,44	1,31	..
	1931-32	53,10,63	10,68,25	42,42,38	7,14,71	4,22,60	2,92,11	5·5	40,06	2,38,33	13,72	..
	1932-33	**55,04,15**	**10,68,25**	**44,35,90**	**6,71,93**	**4,12,35**	**2,59,58**	**4·6**	**41,32**	**2,38,12**	..	**19,86**
South Indian	1930-31	43,76,03	4,95,81‖	38,80,22	5,79,97	3,56,94	2,23,03	5·1	14,72‡	1,77,25	31,06	..
	1931-32	44,70,61	6,36,98‖	38,33,63	5,30,60	3,37,83	1,92,77	4·3	7,94	1,83,50	1,33	..
	1932-33	**44,84,69**	**6,35,81‖**	**38,48,88**	**5,59,96**	**3,61,63**	**1,98,33**	**4·4**	**7,13‡**	**1,84,80**	**6,40**	..
Other railways	1930-31	40,14,88	4,54,60	35,60,28	4,07,96	2,68,16	1,39,80	3·5	7,01	1,51,41	..	18,62
	1931-32	41,48,13	5,36,35	36,11,78	3,92,01	2,61,29	1,30,72	3·2	4,85	1,58,74	..	32,87
	1932-33	**41,55,81**	**6,36,73**	**35,19,08**	**3,78,16**	**2,52,97**	**1,25,19**	**3·2**	**4,16**	**1,70,05**	..	**49,02**
Suspense	1930-31	..	..	..	..	..	..	..	..	..	..	..
	1931-32	..	..	..	..	10	—10	..	..	..	..	10
	1932-33	..	..	..	..	..	..	..	..	..	..	..
Adjustments :—												
1. Net result of adjustment of credits on account of released materials and expenditure on non-wasting assets of company-managed railways under Repairs and Maintenance.	1930-31	..	..	..	..	—2,24,90	2,24,90	..	..	..	2,24,90	..
	1931-32	..	..	..	..	9,01	—9,01	..	..	..	..	9,01
	1932-33	..	..	..	..	**6,23**	**—6,23**	..	..	..	..	**6,23**
2. Write-back of Renewal and Replacement Expenditure of the Company's Sections of the Bengal and North Western and Rohilkund and Kumaon Railways for the years 1924-25 to 1929-30	1930-31	..	..	..	..	59,20	—59,20	..	..	..	..	59,20

Interest on Depreciation and Reserve Fund balances	1930-31	..	..	..	1,32,21	..	1,32,21	..	..	..	1,32,21	..
	1931-32	..	..	..	93,17	..	93,17	..	..	..	93,17	..
	1932-33	..	..	..	**72,69**	..	**72,69**	..	..	..	**72,69**	..
Net Miscellaneous Receipts and Charges not attributable to any one Railway.	1930-31	..	..	..	..	..	..	..	..	..	..	27,33*
	1931-32	..	..	..	..	..	..	..	..	..	..	27,77*
	1932-33	..	..	..	..	..	..	..	..	..	..	**16,54***
Total (Central)	1930-31	7,83,17,75	33,19,58	7,49,98,17	96,41,87	67,45,47	28,96,40	3·7	1,16,30	32,71,55	..	5,18,78
	1931-32	7,90,30,21	39,57,71	7,50,72,50	87,55,92	62,77,38	24,78,54	3·1	64,19	33,06,64	..	9,20,06
	1932-33	**7,97,11,72**	**40,36,25**	**7,56,75,47**	**86,34,97**	**62,85,63**	**23,49,34**	**3·0**	**65,21**	**32,90,52**	..	**10,22,93**
Provincial Railways	1930-31	14,61	..	14,61	(a)2,21	..	2,21	..	..	57	1,64	..
	1931-32	14,61	..	14,61	(a)1,61	..	1,61	..	..	58	1,03	..
	1932-33	**14,61**	..	**14,61**	**(a)1,81**	..	**1,81**	..	..	**57**	**1,24**	..
Grand Total (Central and Provincial)	1930-31	7,83,32,36	33,19,58	7,50,12,78	96,44,08	67,45,47	28,98,61	3·7	1,16,30	32,72,12	..	5,17,14
	1931-32	7,90,44,82	39,57,71	7,50,87,11	87,57,53	62,77,38	24,80,15	3·2	64,19	33,07,22	..	9,19,03
	1932-33	**7,97,26,33**	**40,36,25**	**7,56,90,08**	**86,36,78**	**62,85,63**	**23,51,15**	**3·0**	**65,21**	**32,91,09**	..	**10,21,69**
North Western (Commercial)	1930-31	1,13,67,34	..	1,13,67,34	14,97,95	11,29,52	3,68,43	3·2	..	4,85,22	..	1,16,79
	1931-32	1,13,83,69	..	1,13,83,69	13,33,60	10,07,20	3,26,40	2·9	..	4,84,80	..	1,58,40
	1932-33	**1,13,73,94**	..	**1,13,73,94**	**12,87,22**	**9,85,16**	**3,02,06**	**2·7**	..	**4,79,69**	..	**1,77,63**
Non Commercial (Strategic) (North Western and Aden Railways).	1930-31	34,17,60	..	34,17,60	1,47,50	(b)2,18,58	(b)—71,08	—2·1	..	1,46,91	..	2,17,99
	1931-32	34,53,05	..	34,53,05	1,31,59	(c)1,81,47	(c)—49,88	—1·4	..	1,48,87	..	1,98,75
	1932-33	**34,30,46**	..	**34,30,46**	**1,27,41**	**1,90,04**	**—62,63**	**—1·8**	..	**1,46,55**	..	**2,09,18**

† Includes Capital provided by the Palanpur Durbar.

‡ Includes payments to Durbars—

	1930-31.	1931-32.	1932-33.
Jaipur Durbar	6,99	6,52	6,49
Limbdi "	12	..	..
Palanpur "	17	17	18
Mysore "	18,18	(e)	(e)
Travancore "	1,00	..	17
* Includes recoveries from Travancore Durbar	..	97	46

(e) Payment to Mysore Durbar are no longer included in the surplus profit of Madras and Southern Mahratta Railway.

‖ Includes capital expenditure on Tinnevelly Quillon (Indian State Section).

(a) Represent figures on account of subsidized Companies, etc.

(b) Includes Aden Railway :—
Column 7 8
" 8 . . . . . —8

(c) Includes Aden Railway :—
Column 7 89
" 8 . . . . . —89

(d) Figures of Capital at charge at end of 1930-31 and 1931-32 include sterling liabilities involved in the purchase of Railways converted at 1s 6d. to the rupee and those at end of 1932-33 at the average rate of the year in which the liabilities were originally incurred.

III.—*General results of working of all Indian Railways.*

27. Traffic and mileage.—The principal figures of traffic on all the Indian Railways are summarised in the table below :—

Particulars.	Year.	Class I Railways.	Other Railways.	Total of all Railways.
(*i*) Total route mileage.	1931-32	38,460	4,353	42,813
	1932-33	**38,566**	**4,395**	**42,961**
(*ii*) Number of passengers originating	1931-32	475,513,000	30,323,400	505,836,400
	1932-33	**471,689,600**	**30,205,600**	**501,895,200**
(*iii*) Number of passenger miles.	1931-32	17,339,974,000	716,844,000	18,056,818,000
	1932-33	**16,890,772,000**	**715,682,000**	**17,606,454,000**
(*iv*) Tons originating	1931-32	71,064,000	3,511,000	74,575,000
	1932-33	**67,163,000**	**3,438,000**	**70,601,000**
(*v*) Number of ton miles.	1931-32	18,106,542,000	240,223,000	18,346,765,000
	1932-33	**16,978,015,000**	**224,526,000**	**17,202,541,000**

28. Analysis and earnings.—The total earnings of all Indian railways, including those with which the Government of India is not directly concerned, amounted to Rs. 96·09 crores, of which Rs. 56·89 crores or 59·2 per cent. were from goods traffic, Rs. 31·34 crores or 32·6 per cent. from passenger traffic and Rs. 7·86 crores or 8·2 per cent. from parcels, luggage and miscellaneous items.

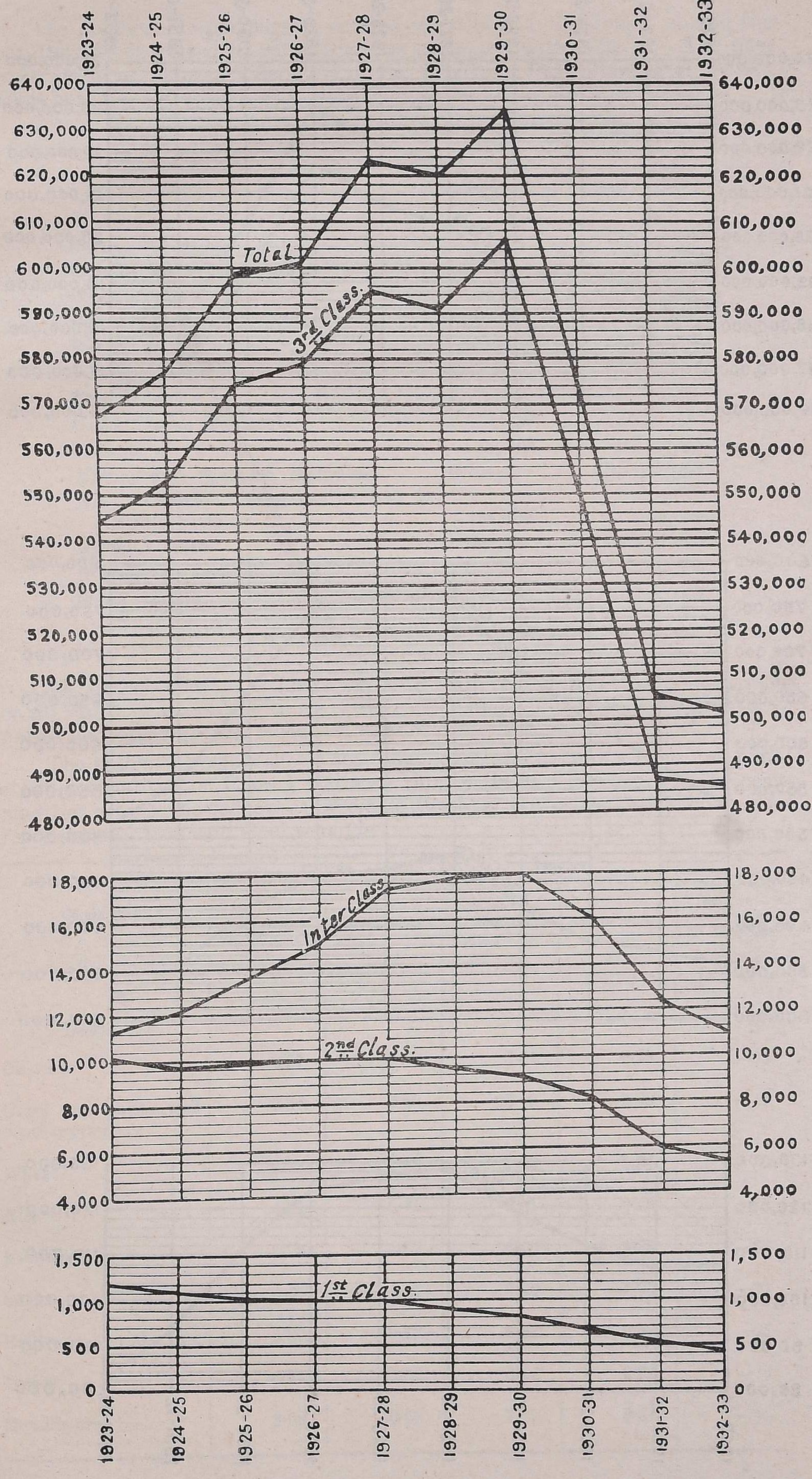
29. *Passenger earnings.*—Passenger earnings fell from Rs. 31·35 crores during 1931-32 to Rs. 31·34 crores during the year under review, showing a slight drop of only 0·03 per cent. The following table shows the numbers of and earnings from passengers separately for each class for the 4 years previous to the war and for the 6 latest years. Graphs are also inserted showing the numbers of passengers carried and of passenger miles by classes from the beginning of 1923-24 :—

Year.	No. of passengers carried (in thousands).					Earnings from passengers (in thousands of rupees).				
	1st class.	2nd class.	Inter class.	3rd class.	Season and Vendor's tickets.	1st class.	2nd class.	Inter class.	3rd class.	Season and Vendor's tickets.
1910	685	2,784	10,702	315,839	24,341	58,82	77,23	94,99	14,65,16	15,85
1911	703	2,947	11,409	331,055	25,687	66,38	83,83	1,08,88	15,73,15	16,85
1912	700	3,030	10,508	356,789	26,810	62,90	83,31	91,37	17,01,35	17,55
1913-14	715	3,253	12,000	390,412	30,114	68,94	88,70	1,03,48	18,37,03	19,36
1927-28	980	9,963	17,351	594,821	*	1,13,71	1,95,67	1,69,33	34,39,39	*
1928-29	912	9,585	17,870	591,679	*	1,12,25	1,91,89	1,66,43	33,53,56	*
1929-30	804	9,125	17,900	606,468	*	1,04,45	1,83,56	1,58,96	34,11,36	*
1930-31	670	8,089	16,189	550,879	*	94,06	1,70,20	1,41,34	30,24,15	*
1931-32	508	5,937	12,354	487,037	*	83,34	1,53,71	1,22,98	27,75,41	*
1932-33	**429**	**5,278**	**10,871**	**485,317**	*	**77,95**	**1,47,44**	**1,15,14**	**27,93,82**	*

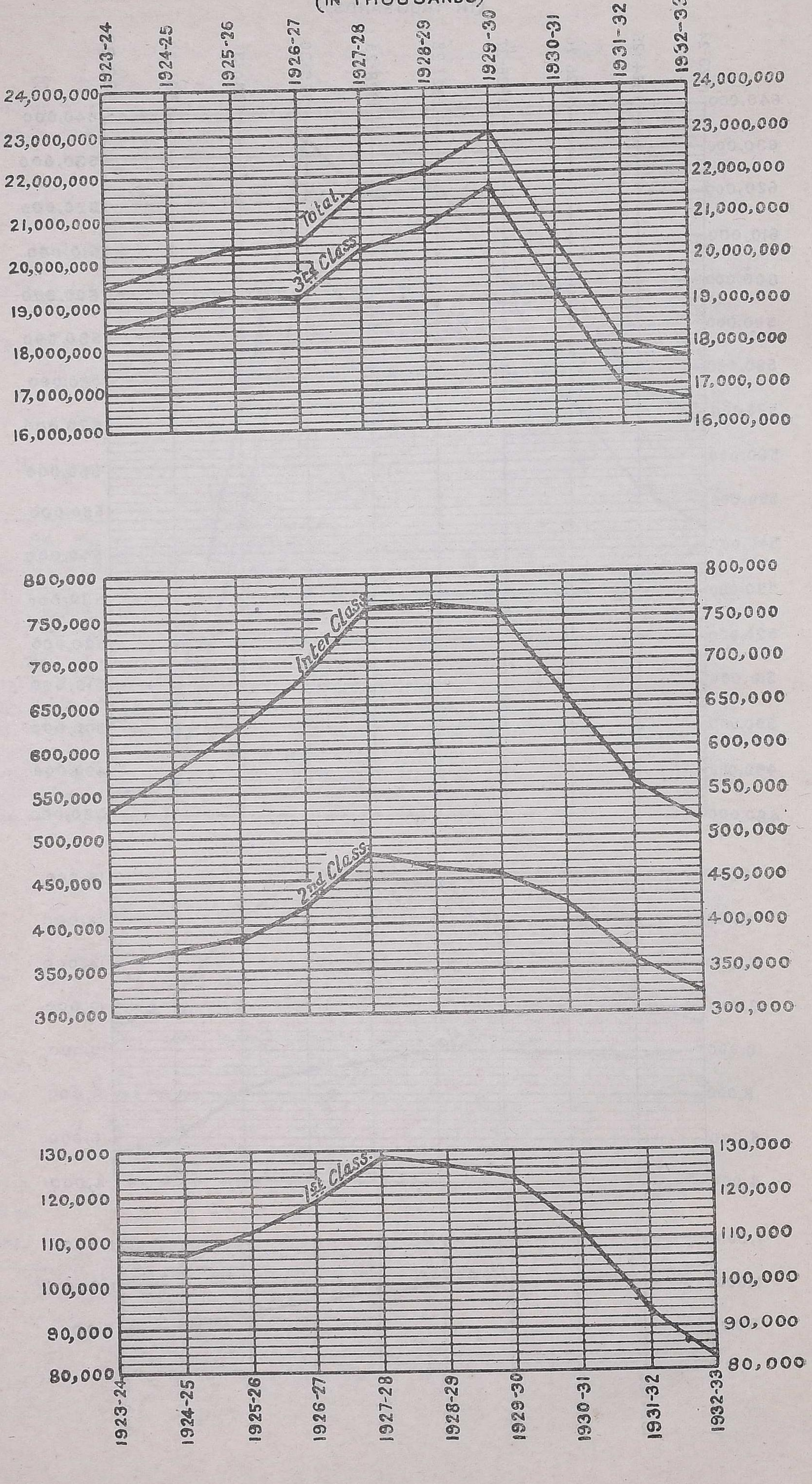
* The number of season and vendor's tickets and their earnings included under the respective classes; the former at the rate of 50 single journeys per month.

NOTE.—In pre-war reports the sum of the numbers of passengers carried on each separate railway was shown as the total number of passengers carried on all railways. Passengers travelling over two or more railways were thus counted as two or more passengers. The actual number of passengers carried on all railways is in fact the same as the number of passengers originating and this figure has been adopted for "number of passengers carried" in the reports from 1923-24 onwards. As the number of passengers originating is not available prior to 1923-24 the figures of pre-war years have been modified.

NUMBER OF PASSENGERS CARRIED ON INDIAN RAILWAYS (IN THOUSANDS)



PASSENGER MILES
INDIAN RAILWAYS
(IN THOUSANDS)



The number of passengers carried on Class I Railways during the year 1932-33 decreased by 3·6 millions as compared with 1931-32. The passenger earnings showed a decrease of Rs. 2 lakhs. The following statement shows how these decreases were distributed over the various railways :—

Name of Railway.	Variations in the number of passengers carried as compared with 1931-32.	Variations in earnings as compared with 1931-32.
		Rs.
Assam Bengal	+50,700	-5,53,000
Bengal and North-Western . .	-1,377,100	-60,000
Bengal Nagpur	-1,116,200	-8,33,000
Bombay, Baroda and Central India	+2,683,200	+18,59,000
Burma	-1,638,500	-4,36,000
Eastern Bengal	-2,621,600	-6,77,000
East Indian	-2,011,500	-6,02,000
Great Indian Peninsula . .	+2,673,200	+5,67,000
Jodhpur	+78,000	+1,92,000
Madras and Southern Mahratta .	-2,740,900	+6,12,000
His Exalted Highness the Nizam's State	-754,100	-56,000
North Western	+886,300	-3,31,000
Rohilkund and Kumaon . .	+141,300	+57,000
South Indian	+2,142,800	+62,000
Total .	-3,604,400	-1,99,000

30. *Goods earnings.*—There was a decrease in earnings from goods traffic on all railways amounting to Rs. 1·89 crores, chiefly under oil-seeds, gram and pulses and other grains, wheat, rice, kerosene and sugar.

The statement below shows the tonnage of, and earnings from, the principal commodities on Class I Railways during the last two years. The commodities which showed an appreciable increase are cotton raw and manufactured and iron and steel wrought.

Commodity.	1931-32.		1932-33.		Decrease— Increase + in earnings Rs. (in lakhs).
	No. of tons originating (in millions).	Rs. (in crores).	No. of tons originating (in millions).	Rs. (in crores).	
Decreases.					
Oil-seeds . . .	2·37	3·52	**2·04**	**2·88**	—64
Gram and pulses and other grains.	2·66	3·58	**2·49**	**3·09**	—49
Wheat . . .	1·73	2·16	**1·46**	**1·84**	—32
Rice	4·21	3·71	**3·61**	**3·45**	—26
Kerosene . . .	0·92	1·62	**0·75**	**1·38**	—24
Sugar . . .	0·67	1·51	**0·64**	**1·30**	—21
Railway materials .	5·80	0·72	**4·84**	**0·51**	—21
Petrol . . .	0·27	0·93	**0·24**	**0·79**	—14
Metallic ores . .	2·09	0·58	**1·77**	**0·45**	—13

Commodity.	1931-32.		1932-33.		Decrease— Increase+ in earnings (Rs. in lakhs).
	No. of tons originating (in millions).	Rs. (in crores.)	No. of tons originating (in millions).	Rs. (in crores).	
Decreases—contd.					
Salt	1·43	1·93	**1·34**	**1·86**	—7
Provisions	1·13	2·83	**1·12**	**2·76**	—7
Other commodities	7·50	9·24	**7·25**	**9·04**	—20
Increases.					
Cotton raw and manufactured.	1·30	4·76	**1·46**	**5·19**	+43
Iron and Steel wrought	1·10	1·81	**1·15**	**2·00**	+19
Jute raw	0·70	0·99	**0·81**	**1·12**	+13
Gur, Jagree, Molasses	0·86	1·27	**0·89**	**1·39**	+12
Wood, unwrought	1·11	0·70	**1·18**	**0·79**	+9
Fuel for public and foreign Railways.	18·42	8·83	**17·51**	**8·90**	+7
Tobacco	0·27	0·68	**0·28**	**0·73**	+5
Materials and stores on revenue account.	11·42	2·31	**10·63**	**2·36**	+5
Fruits and Vegetables	1·47	1·11	**1·94**	**1·15**	+4
Fodder	0·81	0·50	**0·87**	**0·54**	+4
Military traffic	0·27	0·27	**0·34**	**0·30**	+3
Manures	0·11	0·09	**0·15**	**0·11**	+2
Marble and stone	2·29	0·70	**2·24**	**0·71**	+1
Live stock	0·16	0·52	**0·16**	**0·53**	+1
TOTAL	71·07	56·87	**67·16**	**55·17**	—170

31. **Alteration in rates and fares.**—In view of the continuance of the trade depression few important revisions of rates and fares were made during the year, most avenues for increasing revenue having been explored during the previous year.

Coaching traffic.—The enhancements in passenger fares and in the rates for luggage and parcels traffic which were introduced over certain railways during the previous year remained in force in the current year. In addition, the fares for 1st, 2nd and 3rd classes were enhanced on some other railways during the current year. Cheap single return journey tickets and reduced rates for parcels traffic were introduced on most railways to meet motor bus competition between many points.

Goods traffic.—The surcharge on coal and coke which was introduced during the last year continued during the current year and assisted in conserving revenue. Many special reduced station to station rates were intro-

duced on all railways with a view either to assisting indigenous industries, encouraging movements of traffic or meeting competition with sea, river and road transport.

32. Compensation claims for goods.—The table below shows for each Class I Railway the amounts paid on account of compensation for goods lost or damaged during the last seven years. It will be seen that the total payment for **1932-33** is substantially lower than in previous years. Incidentally it may be mentioned that in 1922-23 the amount of claims paid exceeded Rs. 120 lakhs.

*Claims for goods lost or damaged paid by Class I Railways (excluding Jodhpur Railway) during 1926-27 to 1932-33.**

Railways.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.	1931-32.	**1932-33.**	Percentage to Goods Earnings.	
								1931-32.	**1932-33.**
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	**Rs.**		
Assam Bengal	20,979	18,006	20,973	19,096	15,976	10,303	**5,600**	0·10	**0·06**
Bengal and North-Western	85,369	59,875	45,387	56,914	26,865	25,291	**25,866**	0·15	**0·13**
Bengal Nagpur	54,988	65,248	1,02,726	77,437	60,128	11,878	**14,255**	0·02	**0·03**
Bombay, Baroda and Central India.	2,60,213	1,57,447	1,21,175	1,07,749	96,011	46,910	**31,242**	0·07	**0·05**
Burma	41,295	42,791	34,696	18,828	22,129	11,947	**9,226**	0·05	**0·04**
Eastern Bengal	1,83,822	1,71,266	1,53,676	1,08,360	83,409	47,013	**43,211**	0·17	**0·15**
East Indian	3,82,219	2,36,368	2,27,600	1,75,501	1,10,596	90,624	**72,983**	0·08	**0·06**
Great Indian Peninsula	1,92,400	1,18,333	1,45,133	1,11,392	1,15,364	1,11,645	**63,868**	0·15	**0·08**
Madras and Southern Mahratta.	84,859	80,517	95,330	1,28,478	70,612	51,557	**22,641**	0·10	**0·05**
His Exalted Highness the Nizam's State.	11,211	11,270	11,443	23,075	16,206	11,978	**9,899**	0·09	**0·08**
North Western	1,55,097	—36,383	99,446	78,321	1,26,939	65,900	**59,117**	0·07	**0·07**
Rohilkund and Kumaon	4,318	7,347	7,204	5,775	2,611	4,574	**1,220**	0·13	**0·03**
South Indian	45,169	17,691	28,350	12,992	18,826	13,732	**7,320**	0·05	**0·03**
TOTAL	15,21,939	9,49,776	10,93,139	9,23,864	7,65,672	5,03,352	**3,66,448**	0·09	**0·07**

* These figures exclude the amount of credits afforded to home line departments for the loss of their goods.

CHAPTER III.

NEW CONSTRUCTION AND ENGINEERING WORKS.

33. Capital Expenditure.—At the end of March, 1933, the total capital at charge on all railways, including those under construction, amounted to Rs. 884·90 crores, of which Rs. 797·26 crores was capital at charge on State-owned Railways inclusive of premia paid in the purchase of Companies' lines. The remainder, Rs. 87·64 crores, represented capital raised by Indian States, Companies and District Boards.

The capital at charge of State-owned Railways is composed as follows :—

	£
Liability and debt incurred in purchase of Railways .	150,106,630
Less liability and debt cancelled by the operation of Annuities and Sinking Funds	—29,284,941
Net amount outstanding	120,821,689*

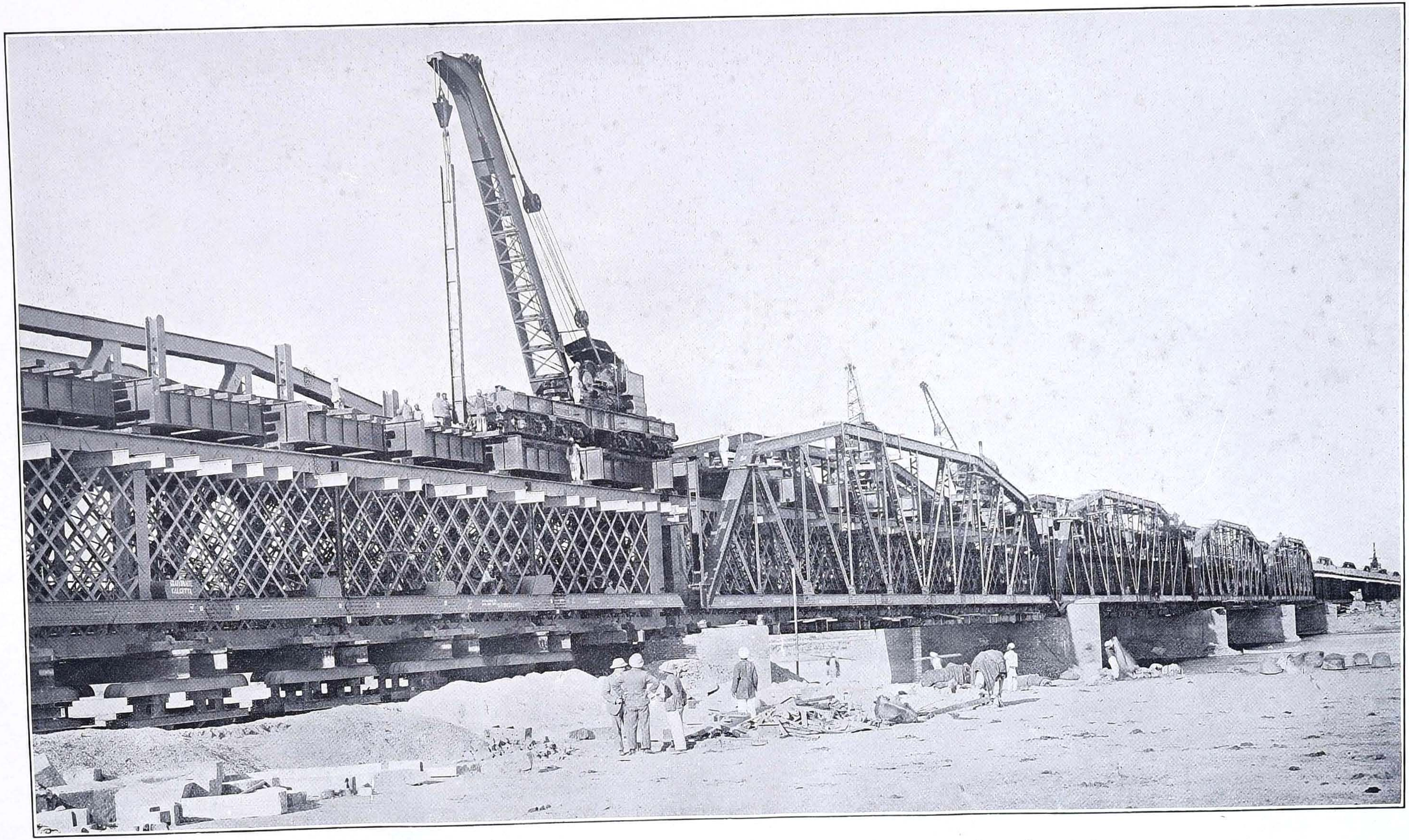
	Rs. (omitting 000)
Direct expenditure by Government	6,27,72,19
The above figure converted at Rs. $13\frac{1}{3}$=£1 . . .	1,69,39,53*
Total .	7,97,11,72
Add Provincial Railways expenditure . . .	14,61
Grand Total .	7,97,26,33

By far the greater portion of this amount, namely, Rs. 7,56,90,08,000, is Government Capital and only 1-20th or Rs. 40,36,25,000 is owned by Companies. These figures include Rs. 34·30 crores on account of capital expenditure to the end of March 1933, on strategic lines.

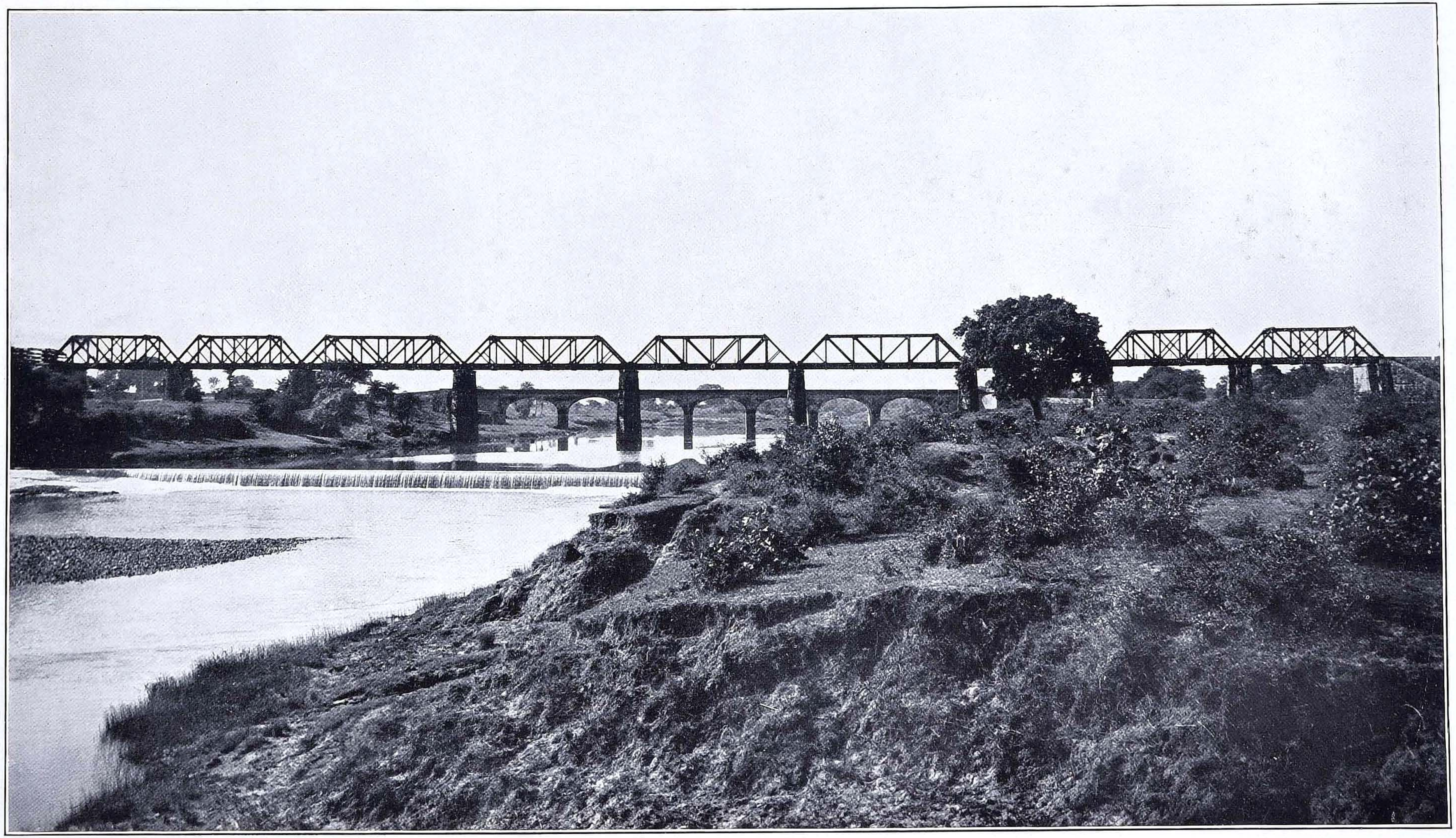
34. The total capital outlay on all railways during 1932-33 was Rs. 1·11 crores, of which Rs. 0·07 crores were spent on State-owned Railways. The following statement shows how this outlay of Rs. 0·07 crores was distributed between open line works, rolling stock and new lines, similar figures being given for the previous four years and for 1913-14.

Year.	Open Lines.			New lines.	Grand Total.
	Works including Stores and general charges.	Rolling-stock.	Total.		
	Rs. crores.	Rs. crores.	Rs. crores.	Rs. crores.	Rs. crores.
1913-14	9·30	7·31	16·61	1·86	18·47
1928-29	12·47	3·98	16·45	8·96	25·41
1929-30	18·12	5·55	23·67	6·51	30·18
1930-31	5·29	3·81	9·10	4·11	13·21
1931-32	1·74	2·16	3·90	2·79	6·69
1932-33	**0·05**	**—0·55**	**—0·50**	**0·57**	**0·07**

* £8,006 converted at the rate of £1=Rs. $13\frac{1}{3}$ and the balance of £ 120,813, 683 converted at the average rate of exchange, ruling in the year in which the liabilities were increased.



Jumna Bridge at Delhi: View from Delhi Abutment showing new girders being erected on the existing spans.



Betwa Bridge.

35. The distribution of the capital outlay in 1932-33 over the different State-owned lines is shown in the summary below :—

Railways.	Open Lines.			New lines.	Grand Total.
	Works, etc.	Rolling-stock.	Total.		
	Rs. crores.	Rs. crores.	Rs. crores.	Rs. crores.	Rs. crores.
Bengal Nagpur	0·11	0·03	0·14	0·08	0·22
Bombay, Baroda and Central India	0·08	0·06	0·14	..	0·14
Eastern Bengal	0·05	0·05	0·10	0·16	0·26
East Indian	0·15	0·10	0·25	0·10	0·35
Great Indian Peninsula	—0·28	—0·44	—0·72	—0·01	—0·73
Madras and Southern Mahratta	—0·02	0·08	0·06	—0·02	0·04
North Western	—0·12	—0·56	—0·68	—0·02	—0·70
South Indian	0·05	0·14	0·19	0·07	0·26
Other Railways	0·03	—0·01	0·02	0·21	0·23
Total	0·05	—0·55	—0·50	0·57	0·07

36. Lines opened during 1932-33.—305·92 miles of railways were opened to public traffic during the year and consisted of :—

177·79 miles on the 5′ 6″ gauge.
128·13 miles on the 3′ 3⅜″ gauge.

Details regarding the sections opened are given below :—

Name of line.	Gauge.	Mileage.	Owner.	Working Agency.	Date of opening.
Sultanpur Zafarabad	5′ 6″	56·78	State	East Indian Railway.	25th May 1932.
Calcutta Chord	5′ 6″	9·34	State	East Indian Railway.	1st Februlry 1932.
Jeenagorah Branch	5′ 6″	0·86	State	East Indian Railway.	31st January 1933.
Sangam Station	5′ 6″	1·13	State	East Indian Railway.	1st September 1932.
Mohamadabad Bidar to Udgir	5′ 6″	50·02	Indian State Line.	His Exalted Highness the Nizam's State Railway.	1st July 1932.
Udgir to Purli	5′ 6″	59·66	Indian State Line.	His Exalted Highness the Nizam's State Railway.	1st March 1933.
Tangla to Majbat	3′ 3⅜″	27·27	State	Eastern Bengal Railway.	1st December 1932.
Majbat to Rangapara	3′ 3⅜″	25·05	State	Eastern Bengal Railway.	7th February 1933.
Polachi Palghat	3′ 3⅜″	34·00	State	South Indian Railway.	1st April 1932.
Visavadar Dhari	3′ 3⅜″	19·49	Indian State Line.	Junagad State Railway.	15th December 1932.
Garbor Road to Khambli Ghat	3′ 3⅜″	22·32	Indian State Line.	Udaipur Chitorgarh Railway.	16th November 1932.

37. Lines sanctioned in 1932-33.—During the year under review no new line was sanctioned for construction.

38. Lines under active construction on 31st March 1933.—At the end of the financial year 1932-33 a total of 36·55 miles of new lines was under active construction, distributed as follows :—

	Miles.
5′ 6″ gauge	9·34
3′ 3⅜″ gauge	27·21
2′ 6″ gauge	*nil.*
2′ 0″ gauge	*nil.*
Total	36·55

The lines under active construction are given in the table below, which also shows the construction agencies and the progress reached :—

Name of line.	Gauge.	Mileage actually under construction.	Working agency.	* Progress of work (Proportion completed) on 31st March 1933.
1. Calcutta Chord . . .	5′ 6″	9·34	East Indian Railway	·99
2. Irrawady Bridge at Sagaing .	3′ 3⅜″	4·86	Burma Railways .	·82
3. Khambli Ghat-Phulad (Mauli-Sursinghjika Gudha).	3′ 3⅜″	13·00	Mewar Darbar .	·05
4. Arasalu-Anantapur . . .	3′ 3⅜″	9·35	Mysore Railway .	·39
Total .	..	36·55		

* ·30 signifies that $\frac{3}{10}$th of the work has been done.

·50 signifies that half the work has been done.

1·00 signifies completion of the work.

39. The following is a brief account of the more important lines, which were under construction during the year :—

(i) *Calcutta Chord Railway.*—In last year's report it was stated that the Calcutta Chord Railway was expected to be opened to passenger traffic in January 1933; and as a result of an inspection made in March 1933, the line was found quite fit for the public carriage of passengers, subject to a speed restriction of 30 miles per hour for all trains. As, however, there was nothing to be gained by running passenger and mail trains over the line, and it was more convenient for the public that such trains should continue to be run *viâ* Naihati, the line was opened for mineral traffic but not for use by passage trains.

(ii) *Talala-Visavadar-Dhari Railway Extension.*—The construction of this branch, a length of 47·27 miles on the metre gauge, was sanctioned in October, 1929, at an estimated cost of Rs. 37,93,560. It consists of two sections, *viz.*, Talara to Visavadar (27·78 miles) and Visavadar to Dhari (19·49 miles). The section from Talala to Visavadar is entirely in Junagad State territory, but the other section lies partly in Baroda territory, and the Baroda Durbar agreed to supply land free of charge. The section of the line from Visavadar to Dhari was opened on 15th December 1932. The entire line is financed and is being constructed by the Junagad Durbar, for the purpose of developing the southern portion of Kathiawar.

(iii) *Mauli-Sursinghjika Gudha extension of the Udaipur Chitorgarh Railway.*—The first and second sections of the railway, *viz.*, Mauli-Kankroli (19·00 miles) and Kankroli-Garbor Road (24·56 miles), were opened on 1st November 1930 and 20th January 1932, respectively. The third section, *viz.*, Garbor Road to Khambli Ghat (22·32 miles) was opened during the year under review on 16th November 1932. The remaining portion of the line from Khambli Ghat to Phulad (13 miles) passes through hilly country and is still incomplete. On completion of this portion, a through metre gauge connection will be established between the Udaipur and Jodhpur Railways.

(iv) *Arasalu-Anantapur Railway.*—The construction of this metre gauge line, which is 9·35 miles long, was started by the Mysore Durbar in July 1931, and more than one-third of the work has been completed. The line is expected to be ready for opening by March 1934.

(v) *Chamrajanagar-Kollegal Railway.*—Work on the construction of this line has not yet been started by the Mysore Durbar.

40. Important lines opened during 1932-33.—Of the lines opened during the year, the following may be specially mentioned :—

(i) *Tangla-Belsiri-Rangapara Railway.*—This line was opened for public traffic in two sections. The Tangla-Majbat section (27·27 miles) was opened on the 1st December 1932, and the Majbat-Rangapara section (25·05 miles) on the 7th February 1933. The railway runs through large areas of thinly populated though potentially rich agricultural land and extensive forest reserves, and supplies a permanent and reliable means of communication in a district where communications were previously very inadequate.

(ii) *Lucknow-Sultanpur-Zafarabad Branch.*—As stated in the report for the year 1931-32, the first and second sections of the Lucknow-Sultanpur-Zafarabad Branch had already been opened to traffic before the end of that year. The last section of the line from Sultanpur to Zafarabad, a length of 56·78 miles, was opened to public traffic on the 25th May 1932. This section connects with the Moghalserai-Lucknow section (Fyzabad Loop) at Zafarabad.

(iii) *Vikarabad-Bidar Extension of His Exalted Highness the Nizam's State Railway—(Bidar-Purli section).*—This metre gauge railway, which is 109·68 miles long, traverses the watersheds of the Manjira and Godavari Rivers. It was opened for public traffic in two sections. The first section from Bidar to Udgir (50·02 miles) was opened on 1st July 1932, and the second section from Udgir to Purli (59·66 miles) on 1st March 1933.

41. Important New Works.—(i) *Vizagapatam Harbour.*—A satisfactory rate of progress in the construction of Vizagapatam Harbour was maintained throughout the year. During the progress of work it was found that large deposits of sand accumulate in the outer portion of the dredged entrance channel and form a bar, due to the regular drifting of sand along the coast as a result of wave action, and that the rate of accumulation is accentuated when there is a disturbance in the Bay of Bengal, even of moderate intensity. It was feared that trouble might be experienced in future, in maintaining the channel free of silt and keeping the Harbour open to ocean-going vessels, and means for dealing with the trouble were considered. After a series of investigations, it was decided to provide a sand-trap on the southern side of the outer channel, with a view to inducing the bulk of the drifting sand to deposit clear of the channel, and also to construct an island breakwater, with two old ships' hulls as its nucleus, in order to localise the deposit as far as possible and also to enable a dredger to cope with the accretion even in moderately bad weather, in the shelter afforded by the breakwater. The sand-trap was dredged during the calm season operations which were concluded in April 1932. The two ships for the breakwater arrived at Vizagapatam in November 1932 and were successfully scuttled, in January 1933. The work of consolidation, round the nucleus formed by the ships' hulls, was immediately taken in hand and by the end of the year under review 114,700 tons of graded boulders had been placed in position in and around the vessels. In addition to the work done on the breakwater and sand-trap, the dredging of the entrance channel, the southern lighter channel and the turning basin was proceeded with, the plant available being used to the best advantage according to the urgency of the different items of the work, and the construction of the powerhouse was in progress throughout the year. The resources of the harbour in respect of water-supply were also being developed, and other main items of work, *e.g.*, moorings for three berths, dredger workshop, manganese dumps, reclamation of the main part of the harbour estate and railway facilities, were practically completed.

(ii) *Dohad workshops, Bombay, Baroda and Central India Railway.*—The foundry, the electric power supply and certain workshop machinery for the 'Locomotive Repair' and 'Manufacturing' units at Dohad, which were left unfinished at the end of the previous year, were completed during the course of the year under review, and good progress was maintained also on the further works intended to provide housing and other amenities for the staff of the workshop colony, which are all nearing completion. The scheme will be

practically complete when certain machines now installed at Parel have been dismantled and re-erected in the new shops at Dohad.

(iii) *Bridge over the Irrawaddy at Sagaing.*—A brief account of the project appeared in last year's report. Considerable progress has since been made and it is anticipated that the bridge will be completed by the end of November or early in December 1933. The bridge when brought into use will be named the "Ava Bridge", after the old fort of Ava which is situated near the abutment of the bridge on the left bank of the river.

(iv) *New Store Yard at Belur.*—The original scheme for a new store yard at Belur, which was estimated to cost Rs. 23 lakhs, was mentioned in the report for the year 1927-28. Subsequently a modified scheme for the construction of the store yard in question was proposed and will, it is estimated, cost Rs. 7·43 lakhs, including the necessary land. The modified scheme, which has been sanctioned, is expected to give all the advantages of the original scheme at a much lower cost.

42. Open Line Improvements.—*Barakar Bridge.*—This project was mentioned in last year's report. Good progress has since been made and it is expected that the work will be completed by the middle of 1933.

(i) *Rup Narain Bridge.*—A brief account of the progress made on the doubling of this bridge appeared in last year's report. Satisfactory progress was maintained and the work was completed during the year under review; the new line over the bridge being opened for public traffic in March 1933.

(ii) *Kotri Bridge on the river Indus, North Western Railway.*—The erection of all the new spans has been completed and only some work remains to be done on the roadways.

(iii) *Jumna Bridge, Delhi.*—For some time past it had been recognised that the girders of the Down line on the Delhi-Jumna Bridge were in a very unsatisfactory condition. These girders were originally erected in 1861, and tests made during the year under review showed that the metal was no longer capable of withstanding the stresses for which the girders were originally designed. It was, therefore, essential that they should be replaced without further delay, and the work was accordingly sanctioned at an estimated cost of Rs. 23¼ lakhs. The new girders are designed for the H. M. Standard of railway loading *plus* modern roadway loading on a proper roadway to carry vehicular traffic. The roadway will replace the old pedestrian footway and cattle track, and the estimated cost of Rs. 7 lakhs for the roadway is being contributed by the local civil authorities. The original girders are being used, after slewing and lowering as required, to act as service girders for the erection of the new spans. The work is progressing satisfactorily and expeditiously, and the material of 6½ spans, out of a total of 12 spans to be erected, has already been placed *in situ.*

(iv) *Mahanadi Bridge on Katni Branch.*—Due to excessive vibration on the very weak girder spans of the old Mahanadi Bridge, the masonry in the piers had disintegrated and the bridge was declared unsafe at the critical time when the Johilla and Nerbudda Bridges, on the Katni branch and Satpura line respectively, were washed away in September 1926. Moreover, the water level in the Mahanadi River on that occasion rose up to and lapped over the bottom booms of the girders of the bridge. For these reasons it was considered advisable to rebuild the bridge on a new alignment a little down stream of the present site, and an estimate for a new bridge, amounting to Rs. 8,98,132 was sanctioned accordingly in November 1932. The new bridge will consist of four spans, each 150 ft. long, designed for modern standards of loading.

(v) *Nerbudda Bridge near Broach.*—The old Bombay, Baroda and Central India Railway bridge over the Nerbudda River was built in 1875, and the girders, which were designed to carry the train loads then in force or anticipated, were by 1903 below strength for the standard of loading adopted in that year for future bridge designs, and the necessity of reconstructing the bridge has been felt for some years past. Originally it was intended to strengthen the existing bridge by the addition of intermediate piers where necessary, but on further consideration it was decided to build an entirely new

double track bridge on a new site. An estimate amounting to Rs. 1,04,19,661 was accordingly sanctioned in August 1932 for a new bridge, designed for the heaviest standard of loading now in force on broad gauge railways in India, and comprising 16 double track main spans, supported on concrete abutments and piers, and having a total length of 4,600 ft. On completion of the new bridge, it is proposed to hand over the existing bridge to the Local Government on payment of a sum of Rs. 5 lakhs, for use as a road bridge. Satisfactory progress has been made in carrying out the necessary preliminary works, such as acquisition of land, construction and consolidation of the approach banks, erection of temporary works and laying of temporary tracks. A contract for the construction of the bridge, including the supply of the girders and other necessary steelwork, has also been placed with Messrs. Braithwaite and Co. (India), Ltd.

(vi) *Shoranur Cochin Railway conversion, South Indian Railway.*—A brief account of the project appeared in the report for the year 1931-32. Further good progress has since been made and about 40 per cent. of the work has been completed. The line is expected to be ready for opening by about the end of 1934.

(vii) *Renewing sleepers on the main line of the Bengal Nagpur Railway.*—The main line of the Bengal Nagpur Railway between Khargpur and Nagpur and between Adra and Sini, aggregating a total length of 109·3 miles, was originally laid with Douglas Fir sleepers. A large number of these sleepers had reached a stage when fast traffic on them was no longer safe and accordingly, in October 1932, sanction was accorded to an estimate, amounting to Rs. 18,31,242, of the cost of replacing the wooden sleepers with new metal sleepers. A special feature of this sanction was that the Bengal Nagpur Railway was asked to obtain the necessary cast iron sleepers in accordance with an agreement that was entered into between the Railway Board and the Indian Iron and Steel Company. The complete scheme is expected to take about 4 years to complete, if funds are available to carry on the work according to programme, which provided for about 40 miles of line to be completed in the year under review.

(viii) *Raipur avoiding yard.*—The necessity for increasing the traffic facilities at Raipur to cope with the growing requirements of the main line itself, as well as with the additional traffic expected on the opening of the Raipur Vizianagram Railway, had long been considered and a scheme to give effect to it, at a cost of Rs. 22 lakhs, had been prepared. Subsequently, however, owing to the very considerable falling off in general traffic, the idea of providing the complete scheme was abandoned and a modified scheme was sanctioned, at a cost of Rs. 6·62 lakhs, providing only for the minimum requirements on first opening of the new Raipur Vizianagram Railway. The facilities consist of a temporary yard, a sick siding and a shunting neck, with necessary staff quarters and a running room, and comprise the preliminary stage of the complete scheme to be undertaken when traffic conditions return to normal.

CHAPTER IV.

TRANSPORTATION AND WORKING.

43. Statistics.—In Volume II of the Report will be found the financial and statistical summaries and statements for the year under review with the corresponding statistics for the preceding year (1931-32), which cover practically the whole range of railway working including both the financial and operating aspects. The following brief references to some of the more important operating statistics may prove of interest.

The business handled by railways is reflected in the figures of passenger miles for passenger traffic and net ton miles for goods traffic. These terms mean the total number of passengers and tons of goods carried multiplied by the number of miles over which they are moved. The following table shows the amount of traffic, expressed in terms of passenger and ton miles, carried over Class I Railways in 1932-33 compared with the previous two years :—

Particulars.	In thousands.			
	1930-31.	1931-32.	**1932-33.**	Percentage of increase (+) or decrease(−) compared with 1931-32.
Passenger miles	19,708,551	17,339,974	**16,890,772**	—2·59
Net ton miles	19,711,926	17,734,697*	**16,632,652**	—6·21

* Revised figure.

It will be seen that there has been a considerable drop in passenger and net ton miles during the year under review compared with the previous two years, due mainly to the general decline in the trade of the country. These figures of net ton miles, which do not include materials and stores carried in departmental trains, *i.e.*, trains run by railways for their own purposes, represent about 97 per cent. of the total traffic carried on all Indian Railways.

Service performed.—The following table shows the number of train miles run to carry the above mentioned traffic. It will be observed that there has been an appreciable decrease in passenger and goods including proportion of mixed train miles on all gauges during the year under review as compared with 1930-31 and 1931-32. Full details of train and engine miles of Class I Railways will be found in statement No. 17 of Volume II, and that of Classes II and III railways in statement No. 37 :—

(Figures are in thousands.)

Particulars.	Class I Railways, Broad Gauge.				Class I Railways, Metre Gauge.				Class I Railways, Narrow Gauge.			
	1930-31.	1931-32.	**1932-33.**	Percentage of variations with 1931-32.	1930-31	1931-32.	**1932-33.**	Percentage of variations with 1931-32.	1930-31.	1931-32.	**1932-33.**	Percentage of variations with 1931-32.
Passengers (including proportion of mixed) train miles.*	69,211	63,139	**62,498**	—1·02	32,269	30,444	**30,354**	—0·30	2,530	2,374	**2,301**	—3·08
Goods (including proportion of mixed) train miles.*	42,094	37,290	**35,799**	—4·00	21,228	18,920	**18,217**	—3·72	1,701	1,613	**1,559**	—3·35

* Includes mileage of electric locomotive trains.

In addition to the train services mentioned above, a large amount of directly unproductive or "other" engine miles, *viz.*, shunting, light and assisting, were run. This mileage was equivalent to 17 per cent. of the total engine miles including departmental. The total departmental train and engine mileage, which is also unproductive, amounted to 8,731 thousand miles, or about 5 per cent. of the total engine miles of the unproductive mileage, the largest portion being on account of shunting miles. The following table shows the proportion of shunting engine mileage per 100 train miles for the last three years both on the broad and metre gauges:—

Particulars.	Broad Gauge.				Metre Gauge.			
	1930-31.	1931-32	**1932-33.**	Percentage of variations with 1931-32.	1930-31.	1931-32.	**1932-33.**	Percentage of variations with 1931-32.
Shunting miles per 100 train miles (Passenger and proportion of mixed).	5·31	5·54	**5·51**	—0·54	5·10	5·04	**5·35**	+6·15
Shunting miles per 100 train miles (Goods and proportion of mixed).	37·5	36·4	**37·0**	+1·65	33·2	31·7	**31·6**	—0·32

Goods trains.—The average through speed of goods trains which is the average speed worked out on the total time taken by a train from start to finish of its run inclusive of stops *en route* shows an improvement, being 11·5 miles per train engine hour on the broad gauge and 10·8 on the metre gauge as compared with 11·0 and 10·5 respectively for the previous year. The final index of goods train working, *viz.*, "net ton miles per engine hour" increased from 1,823 in the previous year to 1,827 on the broad gauge and from 830 to 836 on the metre gauge.

Engines.—The work done by engines is expressed by the figure "engine miles per engine per day". Based on the number of engines on the line, this figure remained the same as last year, *viz.*, 60 on the broad gauge, whereas on the metre gauge it decreased from 62 to 60. Based on the number of engines in use, the number of engine miles per engine per day increased from 103 to 105 on the broad gauge, but remained the same as last year, *viz.*, 99 on the metre gauge. The percentage of engines under or awaiting repairs in mechanical and transportation workshops decreased from 18·1 to 17·6 and from 14·3 to 13·7 on the broad and metre gauges, respectively.

44. Wagon Usage.—The amount of work got out of the available wagon stock is expressed either in the average number of miles run per wagon per day, both loaded and empty wagons being taken into account, or in the average number of net ton miles performed by a wagon per day. It should, however, be noted that in the case of both statistics, the figures indicate the work done by the total number of wagons on railways and not only by the wagons actually in use, as all empty wagons—whether running or lying excess in sidings—are taken into account. The following table shows these two results for 1932-33 compared with the previous year:—

	Wagon miles per wagon day.		Net ton miles per wagon day.	
	1931-32.	**1932-33.**	1931-32.	**1932-33.**
Broad gauge	31·5	**30 5**	277	**261**
Metre gauge	25·4	**24·0**	128	**120**

The average percentage of unserviceable wagons in mechanical and transportation workshops and sick lines to the total number of goods wagons showed an increase from 7·85 to 12·87 on the broad gauge and from 2·63 to 2·93 on the metre gauge.

Passenger vehicles.—The percentage of passenger vehicles under or awaiting repairs in mechanical and transportation workshops and sick lines to the total number on the line increased from 10·34 to 11·21 on the broad gauge and from 8·30 to 8·41 on the metre gauge.

Turning to individual railways some of the principal features of the year's transportation working are detailed below :—

Bengal Nagpur Railway.—The shunting miles per 100 passenger and proportion of mixed train miles (excluding departmental) on the broad gauge recorded an appreciable reduction from 8·91 to 6·63, while the figures for shunting miles per 100 goods and proportion of mixed train miles (excluding departmental) rose from 46·8 to 49·6. The wagon miles per engine hour (including departmental) on the broad gauge rose from 173 to 176 and from 112 to 115 on the narrow gauge. The cost of repairs and maintenance per carriage on line on the broad gauge decreased from Rs. 935·7 to Rs. 799·9.

Eastern Bengal Railway.—The net ton miles per engine hour have advanced from 1,051 to 1,086 on the broad gauge and from 730 to 820 on the metre gauge. The shunting miles per 100 passenger and proportion of mixed train miles (excluding departmental) on the broad and metre gauge rose from 8·20 and 8·82 to 8·95 and 9·17, respectively, while the figures per 100 goods and proportion of mixed train miles (excluding departmental) were appreciably reduced both on the broad and metre gauges, *viz.*, from 86·2 and 47·6 to 74·5 and 39·4, respectively.

East Indian Railway.—The average number of loaded wagons per train increased from 34 to 35 on the main line but remained the same, *viz.*, 23 on the branch lines. The net ton miles per engine hour increased from 2,190 to 2,229.

Great Indian Peninsula Railway.—On the broad gauge the net load in tons per goods train worked by steam and electric locomotives improved from 329 and 454 to 355 and 465, respectively. The net ton miles per engine hour also increased from 1,773 to 1,927.

Madras and Southern Mahratta Railway.—The wagon miles per engine hour (including departmental) increased from 211 to 214 on the broad gauge and from 161 to 165 on the metre gauge.

South Indian Railway.—The net train load rose from 220 tons in 1931-32 to 228 in 1932-33 on the broad gauge while on the metre gauge it decreased from 149 to 145.

The engine miles per day per engine in use increased from 110 to 111 on the broad gauge and from 100 to 102 on the metre gauge. The following table shows the distinct improvement in the net ton miles per engine hour :—

	1931-32.	1932-33.
(*a*) Including Departmental—		
Broad gauge	835	**844**
Metre gauge	578	**651**
(*b*) Excluding Departmental—		
Broad gauge	1,027	**1,046**
Metre gauge	781	**793**

45. Fuel Economy.—The results obtained from the Fuel Economy campaign during 1932-33 are illustrated in graphical form. The results are on the whole satisfactory.

The Fuel Economy Committee met the Fuel Officers of State Railways once during the year (in August 1932) to review the progress and results

COAL CONSUMPTION.

EASTERN BENGAL RAILWAY.

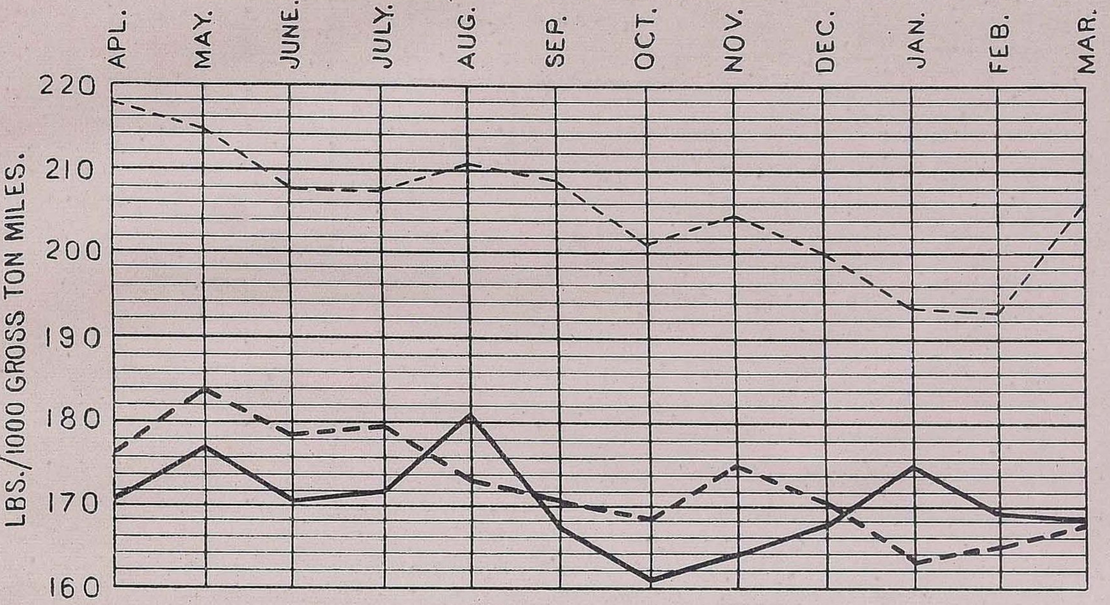
5′-6″ GAUGE.

1926-27 - - - - - - -

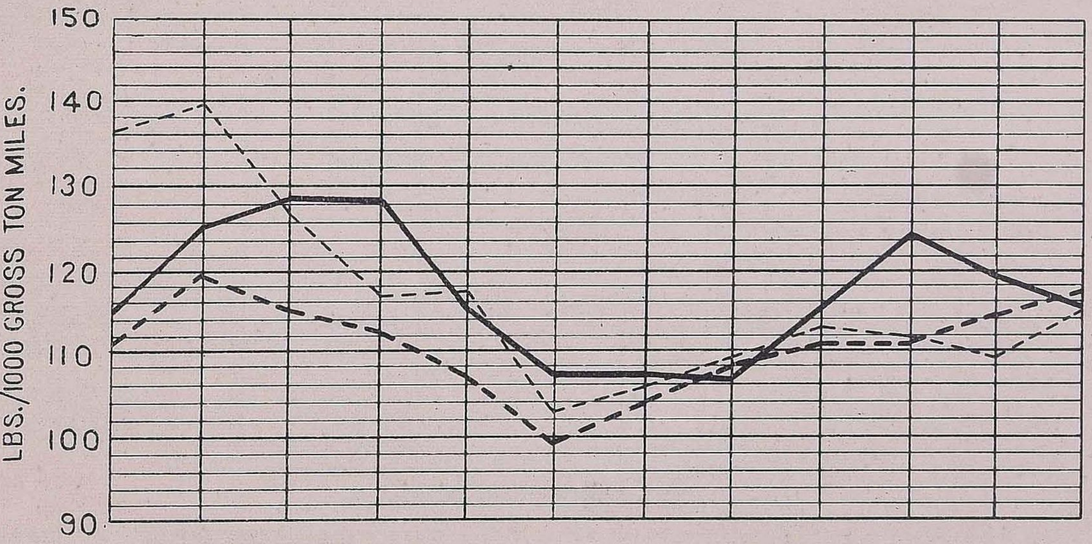
1931-32 — — — — —

1932-33 ————————

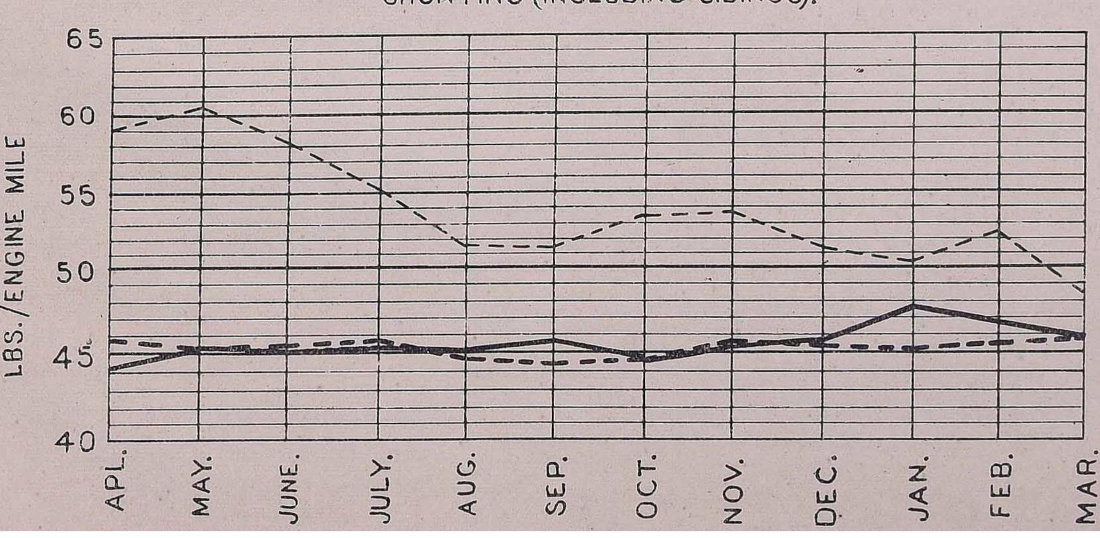
PASSENGER SERVICES (INCLUDING PROPORTION OF MIXED SERVICES).



GOODS SERVICES (INCLUDING PROPORTION OF MIXED SERVICES).



SHUNTING (INCLUDING SIDINGS).



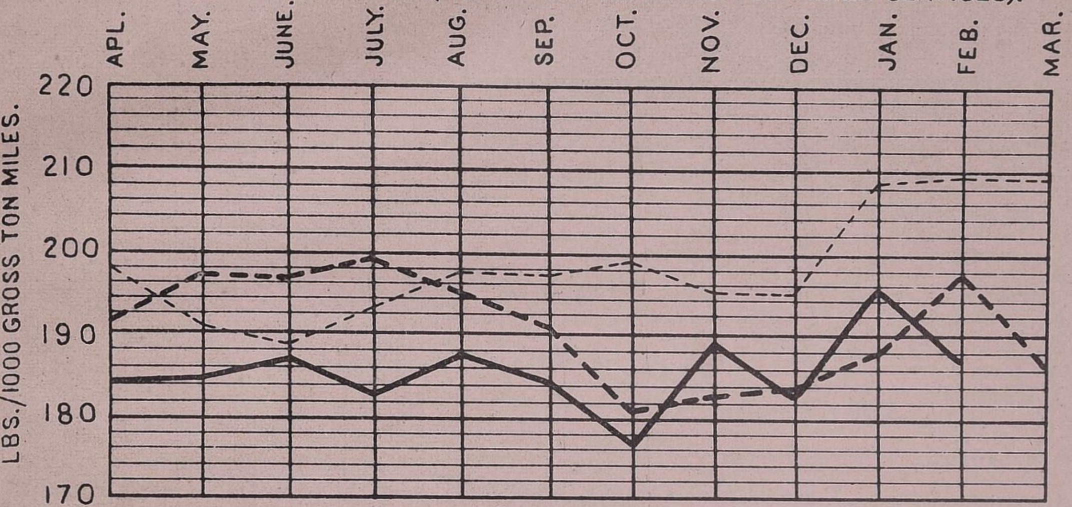
COAL CONSUMPTION.

EASTERN BENGAL RAILWAY.

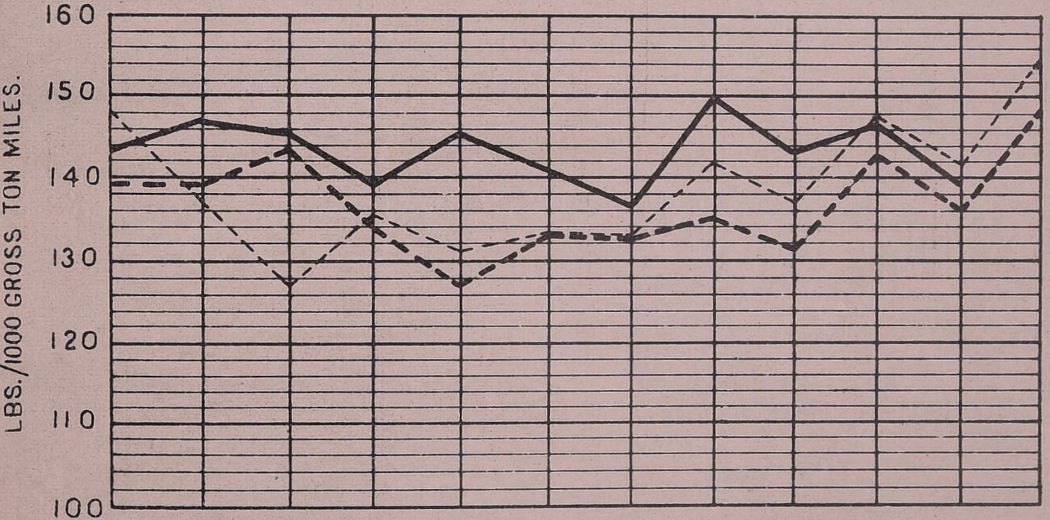
3'-3 3/8" GAUGE.

1926-27 - - - - - - - -
1931-32 — — — —
1932-33 ————

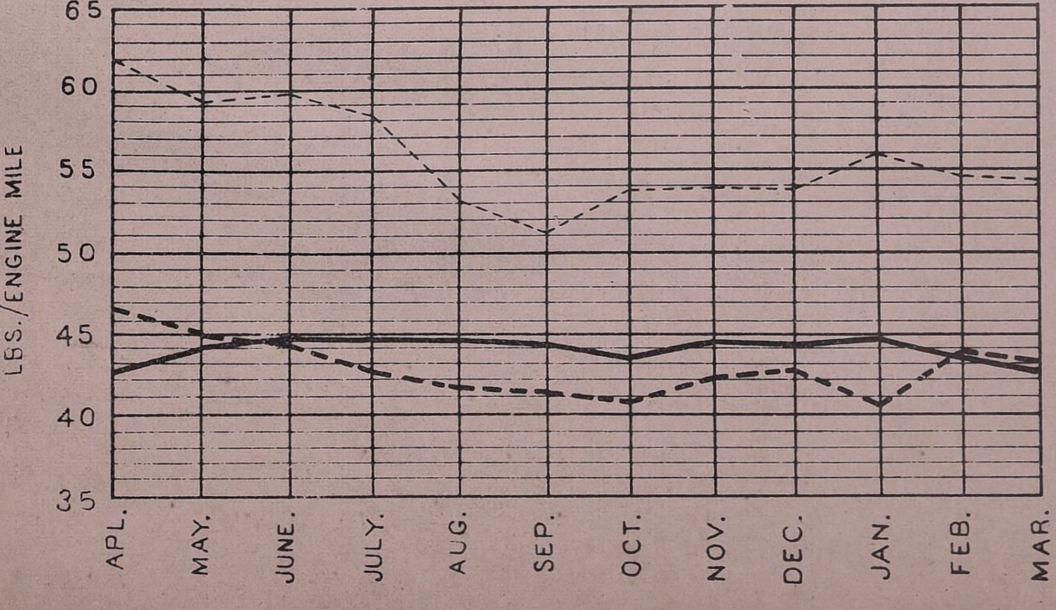
PASSENGER SERVICES (INCLUDING PROPORTION OF MIXED SERVICES).



GOODS SERVICES (INCLUDING PROPORTION OF MIXED SERVICES).



SHUNTING (INCLUDING SIDINGS).

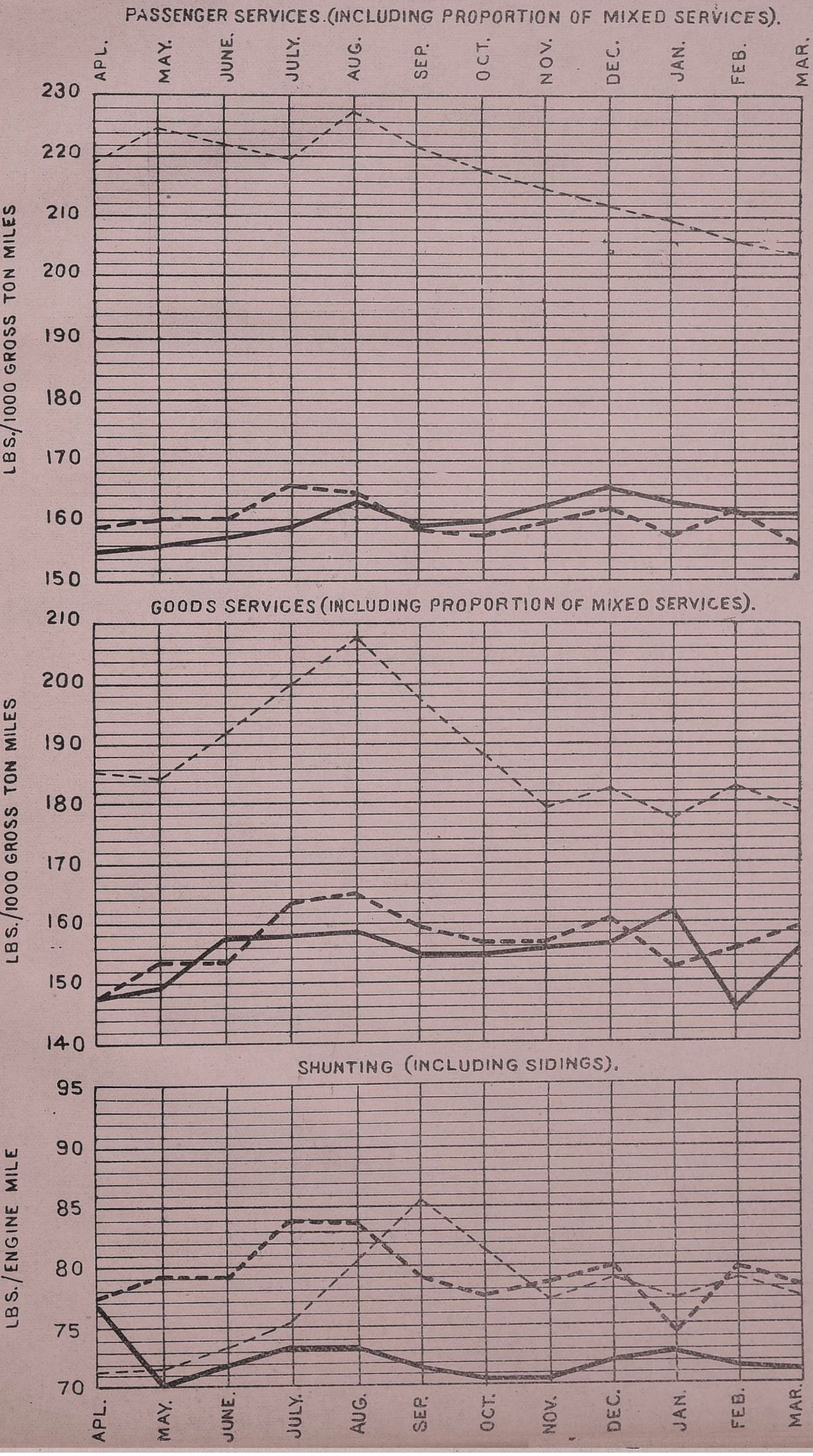


COAL CONSUMPTION.

GREAT INDIAN PENINSULA RAILWAY.

5'-6" GAUGE.

1926-27 ------- 1931-32 - - - - - - 1932-33 ________



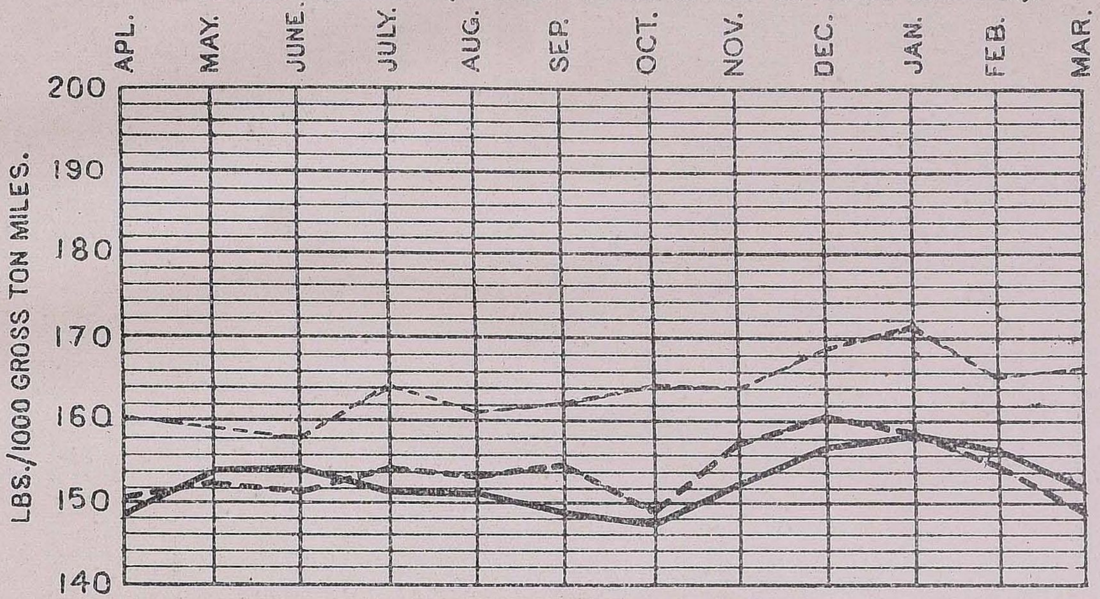
COAL CONSUMPTION.

EAST INDIAN RAILWAY.

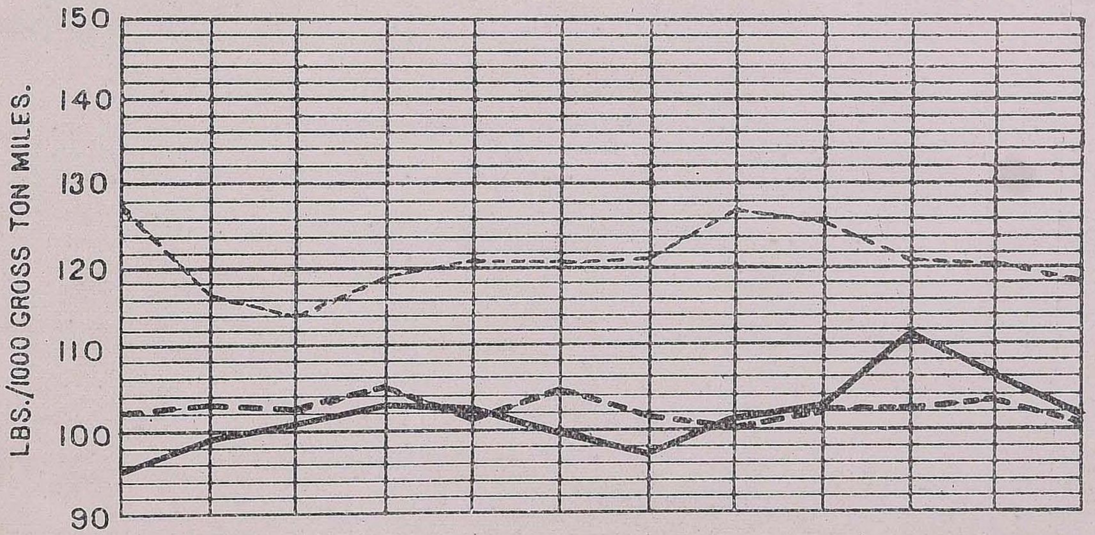
5′-6″ GAUGE.

1926-27 ....
1931-32 — — — —
1932-33 ————

PASSENGER SERVICES (INCLUDING PROPORTION OF MIXED SERVICES).



GOODS SERVICES (INCLUDING PROPORTION OF MIXED SERVICES).



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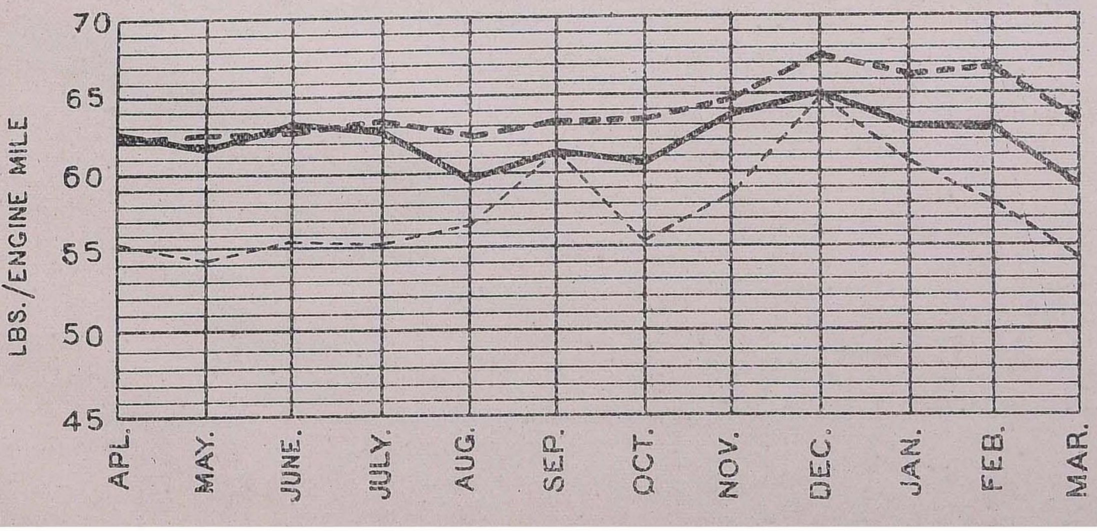
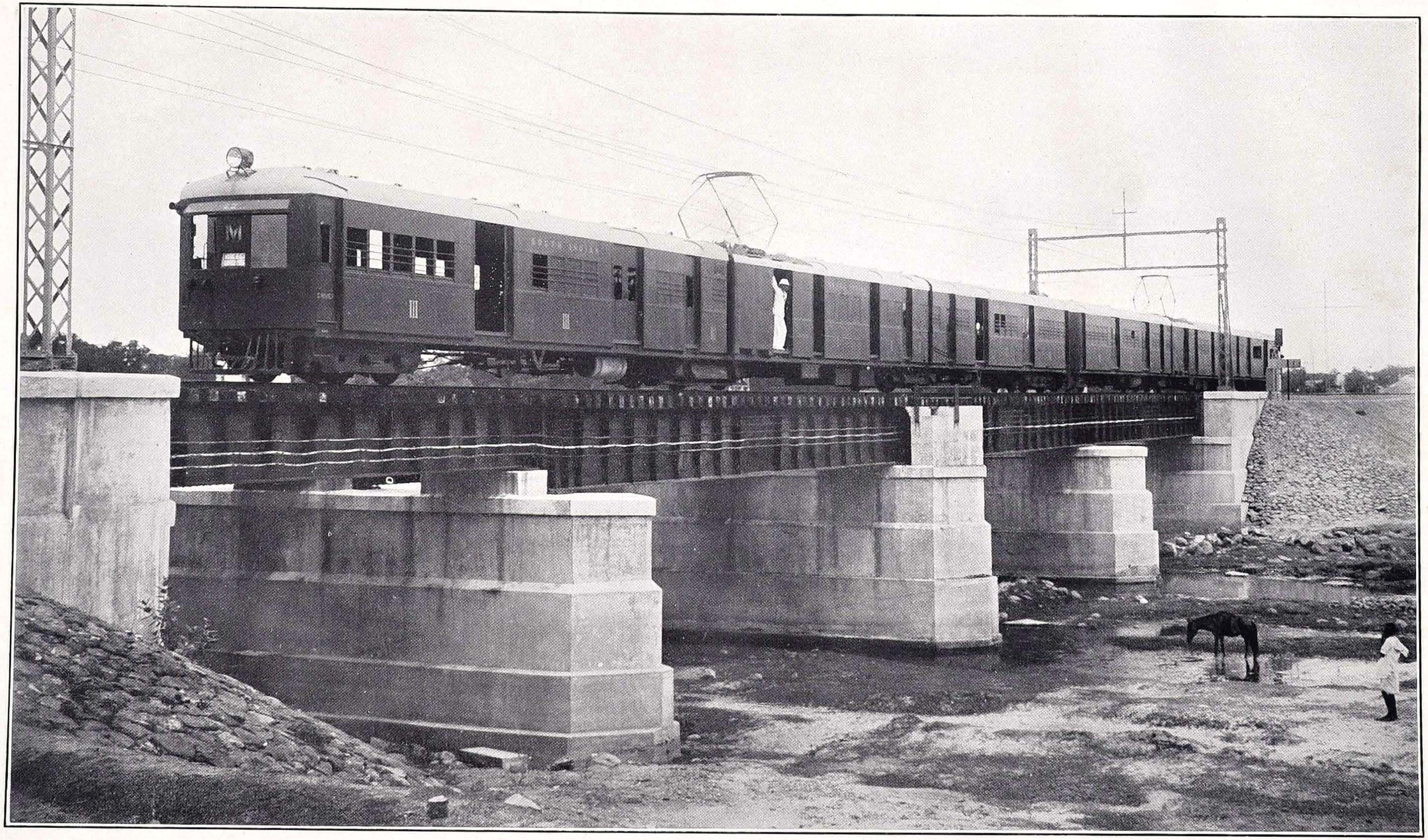




An electric train passing over the Cooum bridge, Madras.

obtained by State Railways and to initiate further measures to be adopted to attain economy in coal consumption.

46. Punctuality of passenger trains.—The following table shows the running of passenger trains on Class I Railways from the point of view of punctuality during the year as compared with the previous year :—

Percentage of passenger trains not losing time to total number of trains run during 1932-33 as compared with 1931-32.

—	All trains.	Mail and important through trains.	Mixed trains.	Suburban trains.	Other passenger trains.
Broad Gauge.					
1932-33	**85·1**	**81·3**	**82·9**	**85·7** **94·8***	**84·3**
1931-32	83·5	74·5	83·2	83·8 91·2*	81·6
Metre Gauge.					
1932-33	**86·5**	**85·0**	**86·6**	**95·9**	**83·8**
1931-32	80·5	72·5	80·5	91·5	76·2

* Great Indian Peninsula and Bombay, Baroda and Central India Railways' Electric trains.

It will be seen that on the broad gauge although the percentage of trains not losing time shows a slight falling off under mixed trains, there has been an appreciable improvement in the running of all other passenger trains. On the metre gauge there has been a substantial improvement in the running of all passenger trains, the percentage of all trains, not losing time going up from 80·5 in 1931-32 to 86·5 in 1932-33.

47. Through Mail and Express services.—The following were the more important changes in the running of mail and express train services during the year under review :—

(*a*) On the Burma Railways, No. 1 Up and 2 Down Expresses and 3 Up and 4 Down Mail trains ran from the 1st April 1932 with Y. C. engines as a result of which, the services were considerably accelerated, the time taken between Rangoon and Mandalay being shortened by over two hours. Due, however, to the necessity of having to reduce temporarily the speed of these trains over certain sections of the main line, the trains were scheduled to run to a revised time-table from the 1st September 1932 to the end of the year under review.

(*b*) Owing to the P. & O. Mail steamers arriving in Bombay on Thursday evenings instead of on Friday mornings, No. 3 Down Frontier Mail was timed to leave Bombay Central, Bombay, Baroda and Central India Railway, with effect from the 1st October 1932, at 21-40 hours instead of 19-20 hours and arrive at Delhi at 21-34 hours instead of 20-15 hours.

(*c*) On the South Indian Railway, No. 5 Trivandrum Express was given a later start from Madras, Egmore, by 45 minutes and timed to arrive at Trivandrum Central only 10 minutes later, thus reducing the duration of the through journey by 35 minutes.

(*d*) On the Eastern Bengal Railway, a fast through service was introduced between Amingaon and Lucknow for the convenience of passengers travelling between Assam and the United Provinces.

(*e*) On His Exalted Highness the Nizam's State Railway, Nos. 3 Up and 4 Down Express trains on the Dornakal-Bezwada section were cancelled.

H

48. System of Ticket Checking.—Mention was made in the last year's report of the system of ticket checking adopted on the East Indian Railway as a result of the report of a committee appointed to enquire into the working of the crew system previously in force on that railway. The new system, as a result of the trial, has proved satisfactory and has now been put on a permanent basis. This system of ticket checking was also introduced on the Eastern Bengal Railway except on the suburban section and on that railway also has worked satisfactorily.

On the suburban section of the Eastern Bengal Railway due to very congested traffic it was considered more desirable to retain the crew system.

49. Road Motor Competition.—It was mentioned in last year's report that the Government of India were considering the appointment of a small technical committee to enquire into the extent of road motor competition and to collect other relevant data with a view to formulating a policy to secure a co-ordinated development of road and rail transport facilities. In July 1932 an Officer attached to the Railway Board and the Road Engineer with the Government of India were instructed to visit the chief provinces (except Burma and Baluchistan) and collect from Local Governments and Railways, information on the following points:—

(*a*) the extent to which motor competition with railways had grown and its effect on railway earnings;

(*b*) cases where new roads were required to open up areas at present without adequate communication;

(*c*) cases where branch lines had been projected but not constructed and where a new or improved road might more economically serve the area; and

(*d*) cases where feeder roads were required to afford agriculturists, etc., easy access to railway stations.

Early in 1933 these officers presented their report which, in addition to information on the above points, dealt with such questions as the present state of road communications, and future road programmes; the better control and regulation of motor transport, and its taxation; and the future policy of railways in the face of growing motor competition.

They also suggested methods for effecting the better co-ordination of communications and transport in future.

The more important conclusions in the report may be summarized as follows:—

(i) Excluding Madras 30 per cent. of metalled roads in British India are parallel with railways while 48 per cent. of railways have metalled roads parallel with them and within 10 miles. Any comprehensive plan of road development should, therefore, take into consideration the possibility of linking the more important villages with the public road system rather than aim at further trunk roads parallel to the railway system.

(ii) As a result of motor competition with railways, class I railways are losing about Rs. 190 lakhs per annum. The carriage of merchandise by motor transport in competition with railways has not at present developed to any great extent. The majority of motor transport in competition with railways is within the zone of 1 to 50 miles. The effect of motor competition upon light railways is very severe and these are peculiarly vulnerable.

(iii) As regards control and regulation of public transport, there is considerable difference in the degree of external control over railways and road transport respectively. There appear to be grounds for considering that motor transport has temporarily outrun the machinery for its control.

(iv) The road system in India has now become somewhat unbalanced. In order to restore the balance a comprehensive plan is necessary, but the question of adequate provision for future maintenance should first be put on a proper footing.

(v) Competition may increase in range and intensity. Motor buses are a great convenience to the public and where they are definitely superior, it is not thought that the public can be deprived of them. Where, however, they are not so greatly superior the wisdom of paying for dual facilities, causing inroads into railway revenues, is doubtful. A system of zoning of motor transport on parallel competitive routes within a range of about 50 miles might be considered.

(vi) In the face of a possible increase of competition from motor transport three courses are open to railways:—

(*a*) Inaction within the zone allotted to motor transport.

(*b*) Counter-competition, and

(*c*) The operation of motor transport by the railways.

So large a proportion of railway earnings comes from third-class passengers within the zone 1 to 50 miles that railways would not lightly consent to material loss of traffic within that zone. Zoning of motor transport cannot be expected to afford railways full protection.

Counter-competition is costing money, and in certain cases apparently out of proportion to the probable return and to the capital invested in the competitive buses.

For these reasons the solution in many cases may lie in the railways themselves operating motor transport on parallel roads. Railways doing so would have to be protected from uneconomic competition from other concerns.

There are objections to railways going on to the roads, but in view of the amount of public capital invested in railways it is arguable that where the railways, and particularly light railways, having developed a route, cannot offer on the railway the facilities which motor transport affords, they should at least have the option of doing so on the roads.

(vii) There is considerable criticism in the report of the present system of taxing motor transport, and the lack of its proper control and regulation.

(viii) A large number of pending railway projects were examined and provisional suggestions made as to these in the light of the recent development of motor transport. It is certain that the advent of motor transport must entirely change the outlook from which branch line railway projects should be viewed.

Pending railway projects have been provisionally divided into six classes:—

(*a*) projects which could probably be abandoned in favour of good roads;

(*b*) projects which probably cannot be justified owing to existence of good roads;

(*c*) projects probably justified by traffic offering, especially heavy merchandise, even where good roads exist;

(*d*) projects required urgently as through connections;

(*e*) projects which may be required as through connections;

(*f*) projects which can probably be abandoned for miscellaneous reasons.

(ix) Complete programmes for road development on a consistent or comprehensive plan do not exist in many provinces and the Committee suggest the desirability of framing comprehensive programmes in all cases.

(x) The most constantly recurring need brought to light in the investigation was the co-ordination of all forms of communication and transport, and the constitutional obstacles in the way of attaining this end are emphasized.

The Government of India after considering the report of the Committee, addressed all Provincial Governments suggesting that a general Conference be convened in Simla in April 1933 for the interchange of views, to be followed immediately by a discussion of a preliminary nature with representatives of local Governments.

There is at present no statutory bar to the operation of road services by State-managed railways, and with a view to giving similar powers to certain domiciled railway companies (chiefly light railways) the Government of India introduced a bill in the Legislative Assembly in September 1932. This bill was further considered in the Delhi session of the Assembly when it was referred to a Select Committee. The Government of India proposed to proceed with the bill, as amended by the Committee, at the first opportunity and if it is passed they will consider moving the Secretary of State to introduce similar legislation in Parliament with a view to giving railways having contracts with the Secretary of State power to run motor services.

During the year under review road motor competition for passenger traffic has continued to make inroads on railway revenue. The position has been carefully watched by railways who have adopted various measures to retain and regain traffic from the roads, *e.g.* :—

(1) Quotation of reduced fares, either for single or return journeys, between points where investigations have shown that traffic might be captured. In some cases the reduced fares are as much as 50 per cent. below the normal fare.

(2) Introduction of more frequent, more convenient and faster train services.

(3) Some railways experimented with light units designed to provide a better and cheaper service than the normal train, and other railways had similar schemes under consideration.

In many cases considerable success has been achieved. There was not any very great increase in road competition for goods traffic, but competition for parcels traffic increased in some areas, particularly for fresh fruit in the Punjab. Rates were reduced, where necessary, to meet this competition.

50. Wagon position.—The severe economic depression continued throughout the year and, in consequence, the available wagon supply was at all times in excess of the demand. As compared with the previous year, the number of wagons loaded during the year under review was less by approximately 89,000, representing 2·37 per cent. Coal despatches were less by approximately 1,067,600 tons representing 6·24 per cent. No difficulty was experienced at any time in meeting indents in full.

51. Neutral examination of interchanged wagon stock.—The system of neutral examination at Junctions by staff working under the Director of Wagon Interchange of wagons offered in interchange continued at the following junctions :—

New Delhi.	Waltair.
Ghaziabad.	Khanalampura.
Ajni-Nagpur.	Chheoki.
Raichur.	Agra Cantonment.

A Neutral Umpire was appointed at Gomoh from the end of July 1932 in connection with interchange of goods stock. The East Indian and Bengal Nagpur Railways, who jointly reported on the experiment, considered that considerable advantages had been obtained from the system and recommended that it should be made permanent.

52. Debits for damages and deficiencies.—The debits raised for damages and deficiencies on wagons interchanged at Junctions under Neutral control show a decrease over the previous year's figures, due mainly to the fact that owing to the falling off in traffic it was possible to avoid the use of a large number of the uneconomical type of wagons.

	Number of wagons interchanged.	Debit per wagon.
		Rs. A. P.
1931-32	744,856	4 12 2
1932-33	787,001	3 7 9

Damaged wagons rejected at neutral junctions represented 1·7 per cent. of the total number of wagons interchanged as against 1·4 per cent. in the previous year. The slight increase in the percentage is due to damage labelling empty wagons at certain junctions to facilitate certain repairs, repacking and overhaul for extending return dates at the request of the railways concerned.

The test of vacuum-braked wagons at neutral junctions continued during the year and the number of wagons penalised for inoperative cylinders was 1·5 per cent. of the total interchanged as against 2·1 per cent. in the previous year.

53. Railway Collieries.—The output from the principal railway-owned collieries during 1932-33 compares with the previous year's output as follows:—

Colliery.	Owner.	Output (tons.)	
		1931-32.	1932-33.
1. Joint Bokharo and Sawang .	E. I. & B. N. . . .	702,345	**560,825**
2. Kurharbaree and Serampore .	E. I.	647,223	**569,934**
3. Bhurkunda	State	161,452	**148,135**
4. Kargali	State	636,429	**414,716**
5. Argada	B. N.	234,016	**194,228**
6. Talcher	B. N.	..	**19,371**
7. Jarangdih	B., B. & C. I. and M. & S. M.	111,124	**137,244**
8. Talcher	M. & S. M. . . .	32,748	**89,561**
9. Kurasia	B., B. &. C. I. . . .	..	**14,204**

State Railway Collieries.

Bhurkunda Colliery.—The development of the underground workings of the mines was considerably restricted owing to limited output. Work was, therefore, confined to four inclines only, and no building work was undertaken except the erection of an engine house at No. 3 Kurse Incline. Plant

was maintained in a satisfactory condition. There was no labour trouble during the year.

Kargali Colliery.—During the year under review the ventilation fan house and the two haulages underground were completed. The East wall of the settling filter tank was also finished.

The general health of the staff and the sanitary conditions in the colliery were good.

East Indian and Bengal Nagpur Railways' Joint Sawang Colliery.—The ventilating fan referred to in the last year's report continued to work satisfactorily. Owing to lack of funds no construction work was carried out during the year.

The feeders of fire damp have practically disappeared. Pumps and haulages worked satisfactorily and there was no labour trouble during the year.

East Indian and Bengal Nagpur Railways' Joint Bokharo Colliery.—The only construction work carried out during the year was the installation of an electri-driven air compressor for working the rock drills. The pipe line from the compressor to the quarries is being laid. While outturn was reduced all plant has been kept in satisfactory condition. The labour supply was adequate, and the health of the community was good.

Giridih Collieries.—(*1*) *Serampore Colliery.*—The underground fires in this colliery, to which reference was made in the last year's report, have been kept under proper control and the ventilation of the working places has been satisfactorily maintained.

(*2*) *Kurharbaree Colliery.*—All plant and machinery have been well maintained, and new screening and electrical haulage systems have proved very satisfactory.

(*3*) In spite of a considerable reduction in output from these two collieries the cost per ton of the net output was reduced from Rs. 4-1-2 last year to Rs. 4-0-6 during the year under review.

(*4*) *Bye-product Coke ovens.*—The table shows that while there was considerable increase in the production of benzol there was a slight decrease in the other bye-products :—

	1931-32.	1932-33.
Coke	23,353 tons.	23,773 tons.
Tar	1,032 ,,	935 ,,
Sulphate of Ammonia . . .	266 ,,	233 ,,
Sulphuric acid	296 ,,	289 ,,
Benzol	36,053 gallons.	28,289 gallons.

Bombay, Baroda and Central India and Madras and Southern Mahratta Railways' Joint Jarangdih Colliery.—The output of this colliery increased by 17,542 tons over that of the previous year. Development to a total output of 200,000 tons is proceeding satisfactorily.

Bombay, Baroda and Central India Railway Kurasia Colliery.—Despatches of coal from the Kurasia Colliery commenced early in the year, the total quantity raised during the year amounting to 14,204 tons. The restriction on its output which was imposed at the time of its acquisition was removed during the year and arrangements are now in hand to develop it to its full capacity of 250,000 tons per annum.

Bombay, Baroda and Central India and Madras and Southern Mahratta Railways' Joint Religara Dari Colliery.—As the development of this colliery has been suspended for some years past, it is proposed to terminate its lease.

Madras and Southern Mahratta Railway Talcher Colliery.—This colliery has passed the development stage. While the estimated output for the year was obtained the cost exceeded the estimate owing to the late arrival of the mechanical handling plant which was not installed until the end of the year.

Bengal Nagpur Railway Talcher Colliery.—The development of this colliery is still in progress, and although it has not been properly opened about 25,000 tons of coal were raised and despatched for use on the East Coast section.

Tonnage of coal inspected by the State Railways' Coal Department.—The State Railwaiys' Coal Department inspected 5,677,166 tons of coal during 1932-33 as compared with 5,713,282 tons in 1931-32.

Coal mined in India.—In 1932 the coal mined in the various provinces of British India amounted to 18,719,587 tons as against 20,514,597 tons in 1931, which indicates a decrease of 1,795,000 tons.

Shipment of coal from Calcutta.—Including bunker coal, shipments from the port of Calcutta to Indian and foreign ports during 1932-33 amounted to 3,193,748 tons of which 483,921 tons were on account of Indian railways and 120,708 tons for Ceylon Government Railways or a total of 604,629 tons as compared with 698,913 tons in 1931-32. At Kidderpore Docks and Garden Reach coal berts, 83,501 tons were shipped by boats and flats during the same period.

CHAPTER V.

ROLLING STOCK AND MATERIALS.

54. **Additions to equipment.**—During the year the following rolling stock, including arrears brought forward from previous years, was on order for broad and metre gauge railways respectively :—

Item.	*Broad gauge.*	*Metre gauge.*
Locomotives	22	53
Coaching Stock	711	325
Goods Stock	850	528

Those actually placed on the line by the end of year were as follows :—

Item.	*Broad gauge.*	*Metre gauge.*
Locomotives	7	28
Coaching Stock	531	156
Goods Stock	725	365

55. The numbers of coaching and goods stock shown in the preceding paragraph are stated in terms of four-wheelers, a bogie being reckoned as two four-wheelers. These figures do not, however, represent the actual net additions to rolling stock as they refer mostly to stock built in replacement of existing engines and vehicles which had reached the end of their useful life.

No broad or metre gauge locomotives were obtained as additions and the number of broad gauge locomotives at the end of the year was 76 less than at the beginning, due to 83 being scrapped during the year, of which only 7 were replaced. On the metre gauge, the number of locomotives at the end of the year was 25 less than at the beginning, 53 being scrapped during the year, 28 of which were replaced. The average tractive effort per engine rose in the course of the year from 24,844 lbs. to 25,045 lbs. on the broad gauge and from 14,574 lbs. to 14,733 lbs. on the metre gauge.

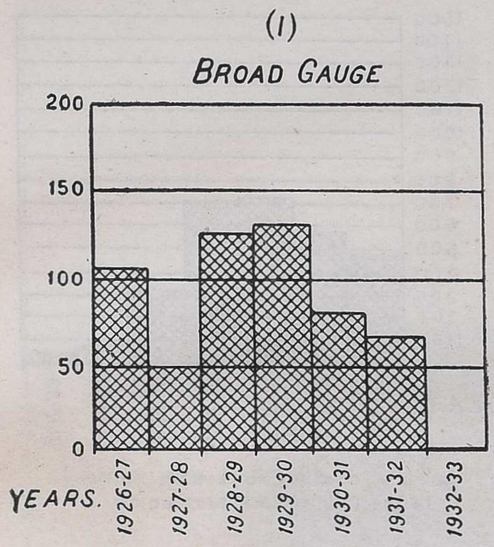
Coaching vehicles.—There was no increase in the number of broad and metre gauge coaching vehicles and the number of broad gauge coaching vehicles at the end of the year was 148 less than at the beginning, due to 679 being scrapped during the year of which 531 were replaced. On the metre gauge, the number of coaching vehicles at the end of the year was 9 less than at the beginning, 165 being scrapped during the year, of which 156 were replaced.

Wagons.—Similarly there was no addition in the number of broad and metre gauge wagons. The number of broad gauge wagons at the end of the year was 1,107 less than at the beginning, due to 1,832 being scrapped during the year of which 725 were replaced. On the metre gauge, the number of wagons at the end of the year was 665 less than at the beginning, 1,030 being scrapped during the year, 365 of which were replaced.

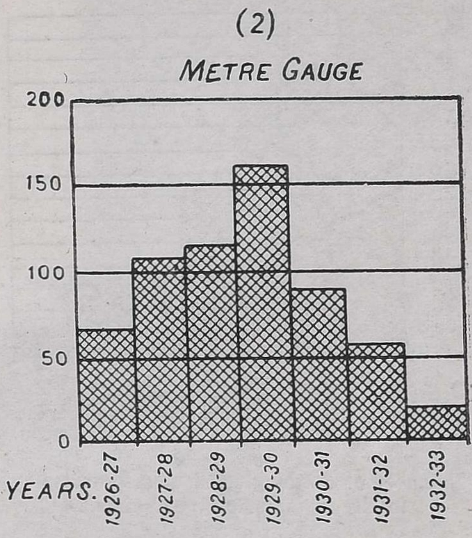
56. The graphs on the following pages show the total number of locomotives, boilers, carriages and wagons provided for in the programmes of Class I Railways during the past seven years. These figures include replacements and renewals.

57. **Supply of rails and fishplates from indigenous sources.**—During the year under review orders amounting to approximately 34,714 tons of rails and 1,650 tons of fishplates were placed with the Tata Iron and Steel Company. In this tonnage is included an order for 11,143 tons of 115 lbs. section rails for the East Indian Railway.

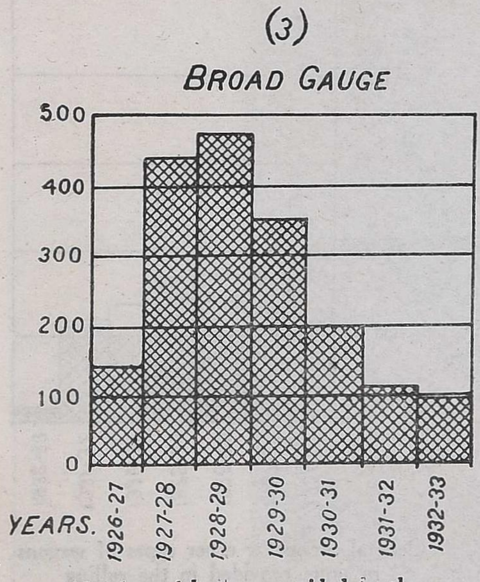
58. **Development of the use of indigenous timbers for carriage building.**—The total consumption of timber in Carriage and Wagon Shops was about 28,000 tons compared with 29,000 tons in 1931-32, and 45,000 tons



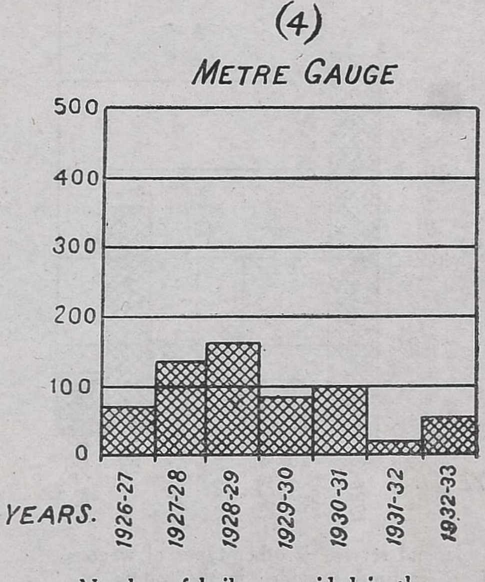
Number of locomotives provided in the rolling stock programme.



Number of locomotives provided in the rolling stock programme.



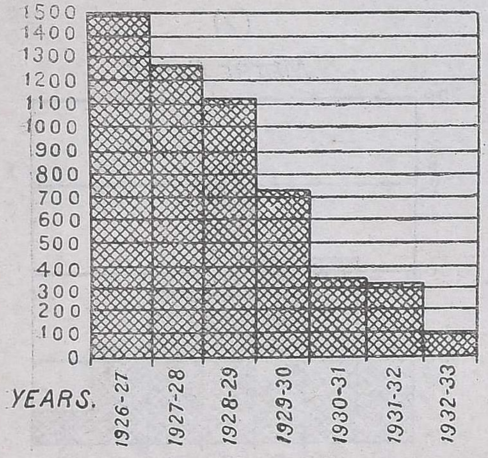
Number of boilers provided in the rolling stock programme.



Number of boilers provided in the rolling stock programme.

(5)

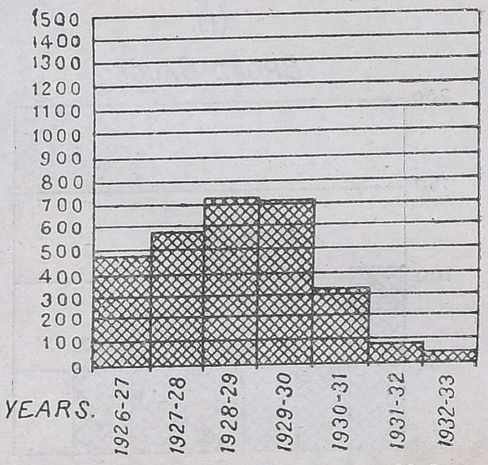
BROAD GAUGE



Number of coaching stock units provided in the rolling stock programme.

(6)

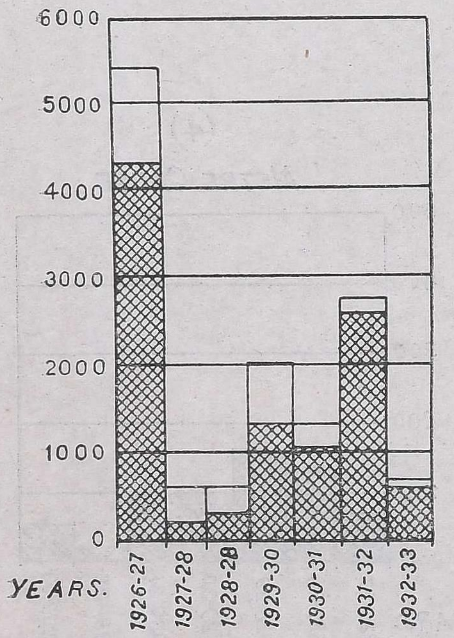
METRE GAUGE



Number of coaching stock units provided in the rolling stock programme.

(7)

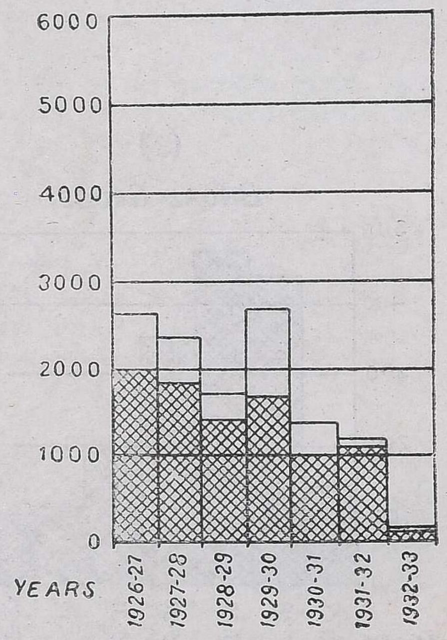
BROAD GAUGE



General service & other types of wagons in units provided in the rolling stock programme.

(8)

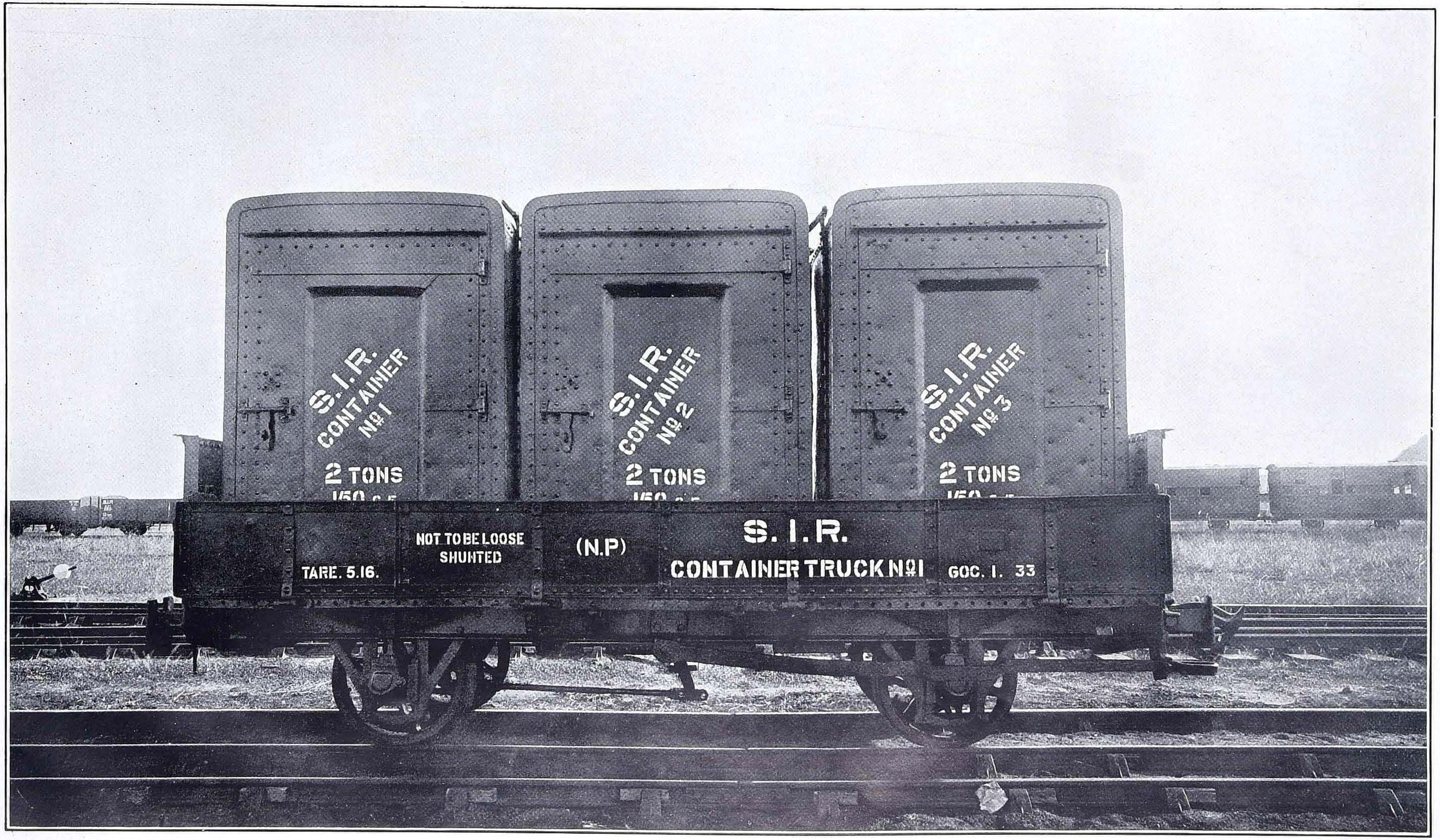
METRE GAUGE



General service & other types of wagons in units provided in the rolling stock programme.

General service wagons shown thus ▩

Other types shown thus ☐



Containers loaded in container trucks on the South Indian Railway.

in 1929-30, the last year during which a normal building programme was in progress. As new construction was reduced to a minimum during 1932-33 no less than 78 per cent. of the total timber consumed was used for repairs and miscellaneous work. Experience indicates more and more that cheaper indigenous timbers will serve many of these purposes; consequently it will be seen that the proportion of indigenous timbers used has steadily risen :—

	Percentage of total.	
	Burma teak.	Indian teak and indigenous timbers.
1929-30	57	43
1930-31	50	50
1931-32	40	60
1932-33	36	64

When more new coaching stock is required the demand for Burma teak may be expected to increase, provided the price is satisfactory.

Experiments with kiln-seasoned indigenous timbers were continued at Lillooah on the East Indian Railway. During the year thirty-seven bogie vehicles were constructed and sent into traffic and seventy-two vehicles, partly constructed of indigenous timber, passed through the shops for overhaul. The timber, with the exception of two cases, was found to be still serviceable although in some cases shrinkage had taken place. Special reports on certain indigenous timbers from Burma, which were being used for the first time, were prepared and circulated for information to those concerned.

On the North Western Railway the use of indigenous timber, chiefly *deodar*, rose from 77 per cent. to 87 per cent.

The total amount spent on timber, other than sleepers, by Class I Railways (excluding His Exalted Highness the Nizam's State Railway and the Jodhpur Railway) during the year was only Rs. 14·17 lakhs compared with Rs. 37·99 lakhs in 1931-32 and Rs. 108·7 lakhs in 1929-30.

59. Wooden Sleeper Purchase Organisation.—The total purchases of wooden sleepers during the last three years have been :—

	1930-31.	1931-32.	1932-33.
	(Number of sleepers in lakhs.)		
Broad gauge	15·04	21·34	12·15
Metre gauge	11·47	11·47	11·06
Narrow gauge	1·31	1·30	1·17

Demands for renewals on the broad gauge lines were reduced to a minimum for the sake of economy and there was no new construction during the year, hence the total of wooden sleepers purchased reached an exceptionally low level.

The relative position of the various kinds of sleepers is seen from the following percentages, based on the total number of sleepers in the track of Class I Railways :—

	1932-33.			
	Wood.	Cast Iron.	Steel.	Other kinds.
Broad gauge . .	44·4	38·5	16·8	0·3
Metre gauge . .	71·8	5·8	22·2	0·2

The wooden sleeper track mileage of all gauges on Class I Railways on March 31st, 1933, was 28,900 miles out of a grand total of 52,454 miles.

No wooden sleepers were imported from abroad, and hardly any orders for special sized sleepers were placed in Burma, as was done in past years, because the reduced requirements could be met in India at lower prices. The price of *sal* sleepers in the Eastern Group remained steady at Rs. 6-12 for broad gauge and Rs. 2-12 for metre gauge sizes, though at the end of the year it dropped considerably to Rs. 5-2 and Rs. 2, respectively, for future

orders placed over a period of three years. The three-year contract with the Government of Nepal for *sal* sleepers came to a conclusion during the year and no fresh long-term commitment has been made.

At Dhilwan on the North Western Railway the following soft wood sleepers of coniferous trees were impregnated with a mixture of 40 per cent. creosote and 60 per cent. liquid fuel :—

	Fir.	Chir.	Kail.	Deodar.
Number of broad gauge sleepers .	113,799	251,297	37,572	875
Absorption	14·1 lbs.	14·8 lbs.	14·1 lbs.	12·3 lbs.

The prices of the treated sleepers, including all charges, were :—

	Rs.	AS.	P.
Treated chir	5	1	5
,, fir	4	10	9
,, kail	4	6	1

The sleeper treating plant at Naharkatya, Assam Bengal Railway, had an output of 189,140 metre gauge sleepers. The cost of the sleeper was Rs. 2-4-0 and the treatment came to 13 annas 3 pies per sleeper, total Rs. 3-1-3.

The total amount spent on wooden sleepers on Class I Railways (excluding His Exalted Highness the Nizam's State Railway and the Jodhpur Railway) was Rs. 1·27 crores compared with Rs. 1·59 crores in 1931-32 and Rs. 2·37 crores in 1929-30.

The seventh annual meeting of the Sleeper Pool Committee took place at the Railway Board's Office, New Delhi, on the 30th November 1932.

60. Value of railway materials purchased.—The value of stores purchased by Class I Railways (excluding His Exalted Highness the Nizam's State and Jodhpur Railways which are mainly the property of Indian States) shows a large decrease from Rs. 15·99 crores in 1931-32 to Rs. 11·04 crores in 1932-33. The principal decreases, as indicated below, were under rolling stock (Rs. 196 lakhs), permanent way (Rs. 161 lakhs), tools and stores (Rs. 70 lakhs) and other materials (Rs. 29 lakhs). Of the total decrease of Rs. 4·95 crores, Rs. 2·43 crores were accounted for under " imported materials " and Rs. 2·52 crores were under " indigenous materials ", the decrease under the latter being mainly under permanent way (Rs. 148 lakhs), tools and stores (Rs. 35 lakhs), other materials (Rs. 31 lakhs) and rolling stock (Rs. 28 lakhs).

Heading.	VALUE OF IMPORTED MATERIALS.			Value of indigenous materials.	Total purchases **1932-33.**	Total purchases 1931-32.
	Purchased direct.	Purchased through Agents in India.	Total imported materials.			
	Rs. crores.	Rs. crores.	Rs. crores.	Rs. crores.	Rs. crores.	Rs. crores.
Rolling stock	0·47	0·57	1·04	0·29	**1·33**	3·29
Tools and stores	0·13	1·42	1·55	1·49	**3·04**	3·74
Permanent way	0·03	0·12	0·15	1·92	**2·07**	3·68
Electric plant	0·14	0·47	0·61	0·01	**0·62**	0·87
Building and station materials and fencing .	0·01	0·10	0·11	0·07	**0·18**	0·29
Bridge work	..	0·07	0·07	0·06	**0·13**	0·15
Workshop machinery	0·07	0·18	0·25	..	**0·25**	0·26
Engineer's plant	0·03	0·10	0·13	0·01	**0·14**	0·14
Other materials*	..	0·30	0·30	2·98	**3·28**	3·57
TOTAL .	0·88	3·33	4·21	6·83	**11·04**	15·99

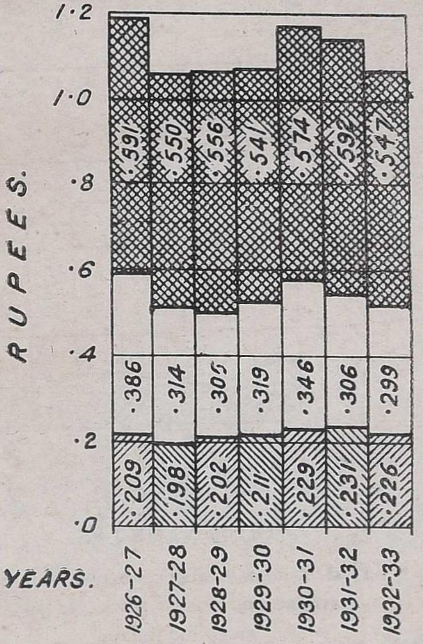
* Other materials consist of coal and coke, stone, bricks, lime and ballast, etc.

Running repairs shown thus
Workshop repairs shown thus
Operating expenses shown thus

COST OF MAINTENANCE AND SUPPLY OF LOCOMOTIVE POWER PER 1,000 GROSS TON MILES.

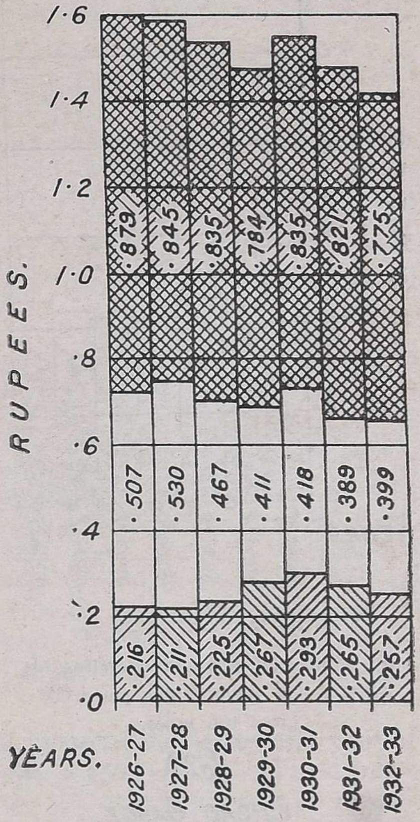
(1)

BROAD GAUGE.



(2)

METRE GAUGE.

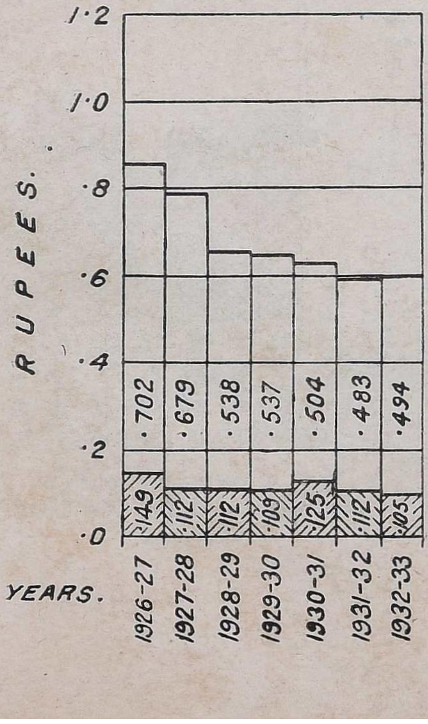


COACHING VEHICLES.

COST OF MAINTENANCE AND OPERATION OF CARRIAGE AND WAGON STOCK PER 1,000 GROSS TON MILES.

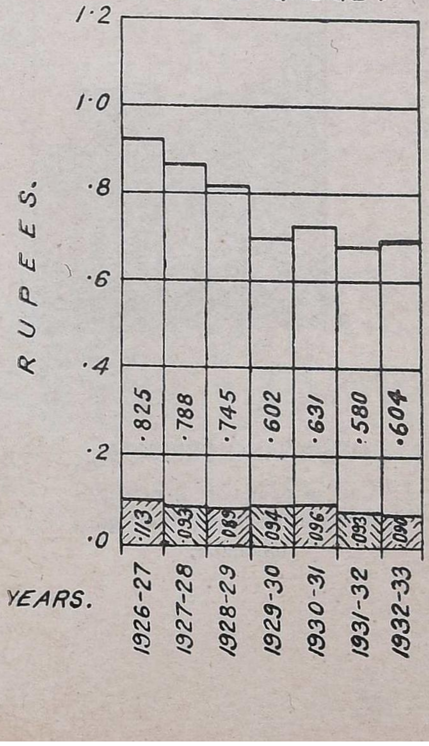
(3)

BROAD GAUGE.



(4)

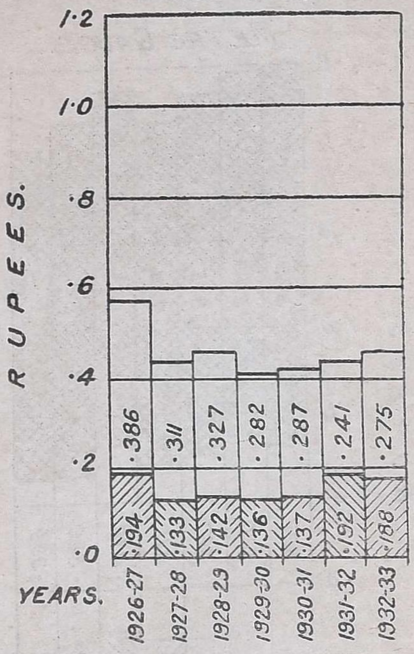
METRE GAUGE.



Running repairs shown thus
Workshop repairs shown thus
Operating expenses shown thus

(5)

BROAD GAUGE.

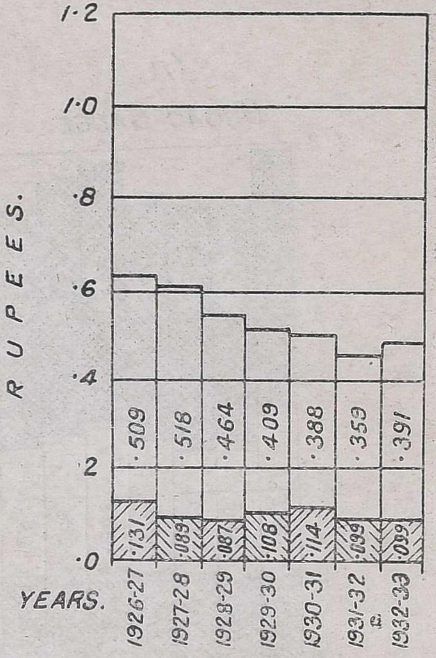


GOODS VEHICLES.

Cost of maintenance and operation of carriage and wagon stock per 1,000 gross ton miles.

(6)

METRE GAUGE.

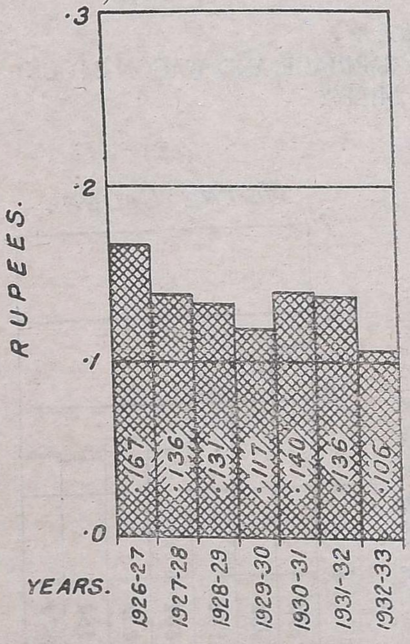


GOODS VEHICLES.

Cost of maintenance and operation of carriage and wagon stock per 1,000 gross ton miles.

(7)

BROAD GAUGE.

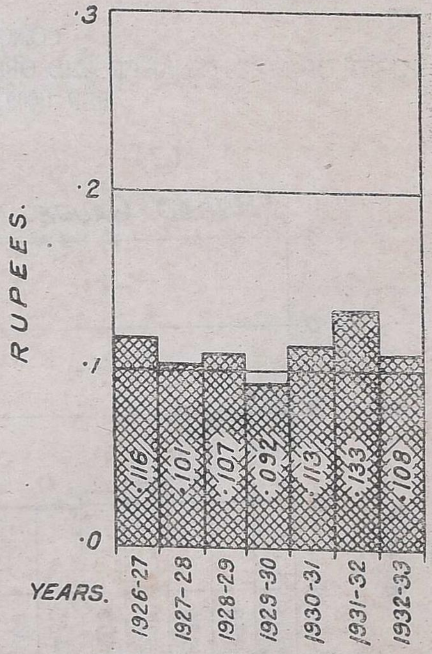


OPERATING EXPENSES.

Cost of operation of carriage and wagon stock per 1,000 gross ton miles.

(8)

METRE GAUGE.



OPERATING EXPENSES.

Cost of operation of carriage and wagon stock per 1,000 gross ton miles.

61. Purchase of Stores by railways through the Indian Stores Department.—The total value of stores purchased by railways through the agency of the Indian Stores Department during the year under review amounted to Rs. 152·77 lakhs of which Rs. 13·43 lakhs represented the value of textiles and Rs. 139·34 lakhs that of engineering, hardware and miscellaneous stores. The list of items, the purchase of which by State-managed Railways through the agency of the Indian Stores Department is obligatory, was reviewed and a number of items of railway stores (*e.g.*, lifts, pumping plant, water columns, tanks, telegraph and telephone apparatus, steel poles, etc.) were added to the list.

The value of stores purchased by Railways through the Indian Stores Department has increased from Rs. 126·14 lakhs in the previous year to Rs. 152·77 lakhs during the year under review despite a fall in market prices. A comparison of the total value of stores purchased by railways during recent years with the value of purchases made by them through the Indian Stores Department during the same period will also show that there has been a considerable increase in the percentage of such purchases.

62. Dynamometer Car.—During the year under review the Dynamometer car was fully employed on further locomotive and fuel trials and five reports prepared by the officer in charge of the car were circulated to railways. Among the reports issued, one dealing with the I. R. S. XS_1 and XS_2 type locomotive trials on the North Western Railway and a supplementary report relating to the unorthodox crank setting adopted in two of these locomotives were probably the most important. These reports contain a large amount of comparative data from which the relative merits of two and four cylinder locomotives and rotary poppet and Walchaerts valve gears are apparent, and which will be of considerable value when the designs for future locomotives are prepared. Other reports deal with the economic and practical possibilities of utilizing low grade fuel in locomotives employed on certain sections of the Great Indian Peninsula Railway and in a Beyer Garrett type locomotive borrowed from the Bengal Nagpur Railway for the trials.

63. Cost of maintenance and supply of locomotive power and cost of maintenance and operation of carriage and wagon stock.—The results obtained during the year under review and the six previous years in regard to the cost of maintenance and supply of locomotive power under the three major heads of accounts (running repairs, workshop repairs and operating expenses) and also of the cost of maintenance and operation of carriage and wagon stock per 1,000 gross ton miles for both broad and metre gauges of the Class I Railways in India, are reproduced in graphic form on the two preceding pages.

64. Central Standards Office.—During the year under review, the Structural Branch of the Central Standards Office issued complete sets of drawings for standard over-riding switches for broad and metre gauges. These switches closely follow the American practice, and are designed to overcome the inherent weakness of the stock rail associated with most types of switches now in use in India and which has accounted for numerous fractures in the past. Complete sets of drawings for 1 in 12 and 1 in $8\frac{1}{2}$ scissors cross-overs for 17′ and 15′ 6″ track centres (broad gauge) using rails of 90 lbs. section, and 1 in $8\frac{1}{2}$ diamond crossings with single or double slips for broad gauge 115 lb. and 90 lb. rail sections were also issued to various railways for comments, and trial manufacture, prior to standardization. Designs for stretcher bars were circulated for remarks, and data was collected in India and from other countries, regarding the design of a suitable rolled steel section with fastenings for broad gauge crossing sleepers.

The design of broad gauge plate girder spans was taken in hand and preliminary sketches showing novel methods of design whereby a span of nominal length may be employed for a suitable range of span openings, were circulated for comments. By increasing the working stress to 9 tons per square inch, and an economic distribution of metal, it has been found possible

to effect an average reduction of 12 per cent. in the weight of such spans. This reduction in weight is equivalent to a 12 per cent. reduction in the cost of steelwork and will enable considerable reductions to be made in the cost of bridge work purchased annually by all broad gauge railways in future years.

In the Mechanical branch the carriage underframe and wagon part drawings were completed and issued during the year; the number of drawings involved being approximately 1,500. The construction drawings relating to a number of broad and metre gauge underframes and wagons were also revised and re-issued.

65. Locomotive Standards Committee.—The Locomotive Standards Committee met once during the year in December 1932. At this meeting the Committee noted the improvement effected in the riding of the YF type locomotive as a result of recent modifications and the further modifications to be tried on the XA type locomotive for the same purpose. The Committee recommended the early trial of roller bearings for the carrying axles of standard locomotives and tenders and mechanical stokers on locomotives with large grate areas, and dealt with a large number of minor modifications that have been suggested by Railways having standard locomotives in operation. The Committee also suggested tolerances for crank pin settings and made recommendations concerning antifriction metal, tyre profiles, side buffers and a standard drive for Caprotti and Lentz valve gears. The Dynamometer car reports on the XS type locomotive and the converted 2-8-0 B. E. S. A. locomotive were examined by the Committee, and the extended use of rotary poppet valve gear on new locomotives, and piston valves with a longer travel on converted goods locomotives were advocated.

66. Carriage and Wagon Standards Committee.—The Carriage and Wagon Standards Committee met once during the year in November 1932. The Committee devoted their attention to a number of modifications to standard coaching body designs among which may be mentioned improvements in upper class body construction and fittings, improved ventilation of upper and lower class bodies and a revised design for dog boxes in brake vans. The Committee also made recommendations with a view to improving the riding qualities of the standard broad gauge carriage underframe and suggested some alterations in design to reduce the maintenance cost of such underframes. In respect of wagons the Committee made recommendations for modifying the door openings of all standard wagons to prevent the ingress of rain water and proposed certain alterations to metre gauge cast steel bogies which experience with these bogies in service has shown to be desirable. The Committee also approved of various types of standard broad gauge buffers in the light of extensive tests which have been carried out during the past three years under the supervision of the Consulting Engineers, and in conjunction with the Electrical Sub-Committee recommended standard capacities for dynamos, batteries and switchgear for use in broad and metre gauge reserved carriage equipment.

67. Bridge Standard Committee.—During the year 1932-33, a meeting of the Committee was held at Simla in September-October.

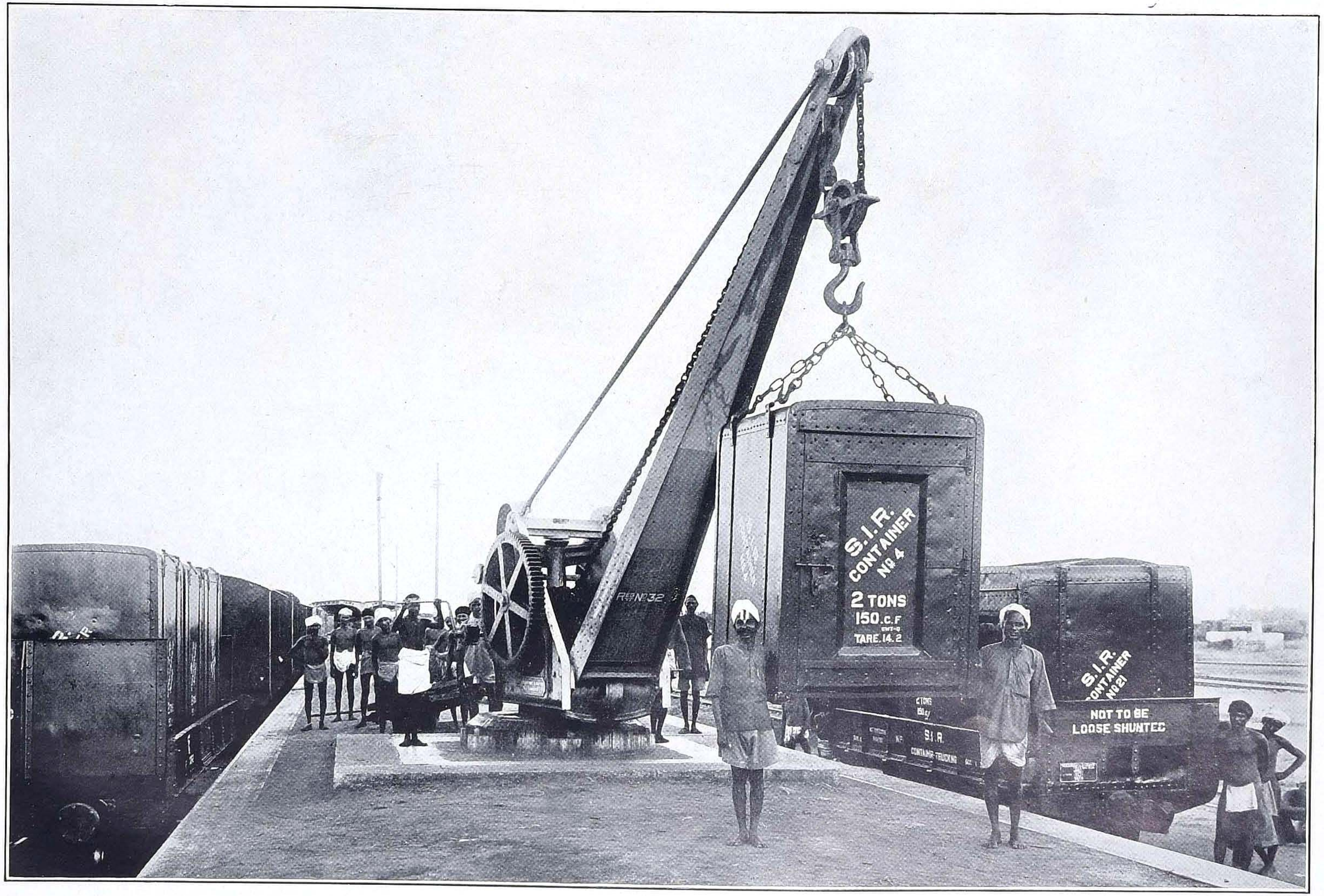
Further experimental evidence as to "impact" on short spans obtained by the North Western Railway, Bridge Department, was considered and the Committee were able to recommend and the Railway Board have approved the retention of the covering formula for impact deduced in 1925 which had been challenged by the publication of the British Bridge Stress Committee's report.

The Board considered that in due course further experimental investigation should be made in India on medium and long span bridges.

The Committee drafted complete new specifications for the manufacture of :—

(1) Bridge girders,

(2) Other steel structures,



Loading of containers in container trucks on the South Indian Railway.

the objects of which were to cover the advancement in technique and new processes of manufacture and to provide specifications which can be used under the Rupee Tender System and be equally applicable to manufacture in India and elsewhere.

The specification for bridge girders contains a clause for cambering girders which is entirely new and is designed to secure the elimination of secondary stresses in the loaded structures.

The Committee considered further evidence as to the dispersion of braking and tractive forces on bridges and made certain recommendations as to the amount of these forces which can be considered as carried through the rails at the ends of the bridge and therefore not imposed on the piers. This relaxation has been accepted by the Board and will have an important bearing on the design of bridge piers.

During the year under review new Bridge rules have been published by the Railway Board containing important modifications including certain increases in permissible working stresses which have followed on the work of the Committee.

68. Track Standards Committee.—A meeting of the Committee was held in January 1933 and many important questions concerning features of track designs and standardization were dealt with and recommendations made on the following:—

(1) The effect on stresses induced on rails that will result from the reduction of the overbalance in locomotives.

The recommendations of the Committee affect certain clauses in the Schedule of Dimensions and the Board have ordered an experimental investigation to be undertaken by the Central Standards Office to obtain actual evidence of stresses in rails with various types of track and locomotives employed in India.

(2) The possibility of eliminating special fittings in metal sleepers to provide for specific gauge widening on curves and economies that can be effected thereby.

The Central Standards Office are taking action in this matter and in the meantime Dynamometer car tests will be undertaken on the Great Indian Peninsula Railway.

(3) Recommendations concerning essential features in the design of loose jaws for steel sleepers.

(4) Spacing of sleepers in turn-outs.

(5) Design of wing rails at crossings.

(6) Proposed modification of the standard tyre profile to meet wear in tyres considered in relation to its effect on crossings.

(7) A proposed section for rolled steel sleepers to be embodied in standard designs for steel sleeper turn-outs.

(8) General questions concerning track standards and designs of the Central Standard Office.

69. Signalling and Interlocking Standards Committee.—During the year under review the seventh meeting of the above committee took place.

An important item was the consideration of a draft Block Signalling Manual. The original draft, which was prepared by a special sub-committee, was modified and finally approved by the Standards Committee at the meeting. This manual has since been issued by the Railway Board.

Another matter of considerable importance concerned the interpretation of the term " Semi-interlocked " and the variations and relaxations of the requirements for stations so classed. The Committee recommended that the specified variations and relaxations as given in the Manual of Instructions for the installation and maintenance of signalling and interlocking should be entirely revised. They recommended that three standards of installation for signalling and interlocking should be established corresponding to the

maximum run through speed required on the section to which the standard was to apply. The standards proposed are as follows :—

Standard (1) 25 miles per hour.

Standard (2) 40 miles per hour.

Standard (3) Unrestricted speed.

In accordance with the orders of the Board these proposed standards have been circulated to the railway administrations and Senior Government Inspectors to obtain their views on their suitability before they are adopted.

Other matters considered by the Committee were the adoption of grease lubrication for signalling equipment and preparation of standard specifications for :—

(*a*) standard magneto wall telephones.

(b) caustic soda primary cells.

(*c*) electric cables for railway signalling, and

(*d*) standard dimensions and specifications for tubular steel signal posts.

The Committee further recommended that railway administrations be requested to submit their proposals, if any, for additional standard fittings or suggestions for the modification of the existing I. R. S. (S) drawings.

CHAPTER VI.

STAFF.

70. Number of staff.—The total number of employees on all Indian Railways and in the office of the Railway Board and other offices subordinate thereto (excluding staff employed on construction) at the end of the year 1932-33 was 710,271 as compared with 731,979 at the end of 1931-32. The increase in route mileage during the same period was 306 miles. The following table shows the number of employees by communities on the 31st March 1932 and 1933. A similar statement showing details by railways is given as Appendix C of Volume II of the Report by the Railway Board on Indian Railways for 1932-33.

Date.	Europeans.	Indians.							Grand Total.
		Hindus.	Muslims.	Anglo-Indians and domiciled Europeans.	Sikhs.	Indian Christians.	Other classes.	Total.	
31st March, 1932 .	4,532*	520,575*	157,876*	13,570*	8,767	14,398	12,261*	727,447*	731,979*
31st March, 1933 .	**4,297**	**504,082**	**152,875**	**13,048**	**8,591**	**15,574**	**11,804**	**705,974**	**710,271**

* The figures with asterisk represent revised figures due to minor corrections made in the figures published last year.

71. Cost of staff.—The following statement shows the number and cost of all staff, superior and subordinate (including labourers), permanent and temporary, open line and construction, employed on Class I Railways during the years 1931-32 and 1932-33. Contractors' labour is not included.

Railway Systems.	Year.	Number of staff on 31st March.						Cost of staff.		
		Open Line.			Construction.					
		Gazetted Officers.	Non-gazetted employees.	Total.	Gazetted Officers.	Non-gazetted employees.	Total.	Gazetted Officers.	Non-gazetted employees.	Total.
1	2	3	4	5	6	7	8	9	10	11
								Rs.	Rs.	Rs.
Assam Bengal	1932	70	16,088	16,158	1	49*	50*	10,66,563	60,87,143	71,53,706
	1933	**72**	**15,523**	**15,595**	*Nil*	**1**	**1**	**10,78,812**	**62,89,866**	**73,68,678**
Bengal and North-Western.	1932	68	26,604	26,672	*Nil*	*Nil*	*Nil*	11,60,554	67,58,486	79,19,040
	1933	**70**	**26,281**	**26,351**	*Nil*	*Nil*	*Nil*	**11,37,522**	**67,04,400**	**78,41,922**
Bengal Nagpur	1932	211*	68,927	69,138*	2	2,198	2,200	38,21,862	2,98,89,783	3,37,11,645
	1933	**200**	**64,276**	**64,476**	*Nil*	**12**	**12**	**35,85,152**	**2,81,02,231**	**3,16,87,383**

NOTE 1.—The figures with asterisk represent revised figures for 1931-32 due to changes made by the railway administrations in the figures published last year.

NOTE 2.—The figures of cost include the salaries and wages of staff, bonus contributions to the provident fund, gratuities, overtime allowances and all other allowances which are of the nature of extra pay and which are not granted to meet some definite expense incurred in the performance of duty, such as travelling allowance.

Railway Systems.	Year.	NUMBER OF STAFF ON 31ST MARCH.						COST OF STAFF.		
		OPEN LINE.			CONSTRUCTION.					
		Gazetted Officers.	Non-gazetted employees	TOTAL.	Gazetted Officers.	Non-gazetted employees.	TOTAL.	Gazetted Officers.	Non-gazetted employees.	TOTAL.
1	2	3	4	5	6	7	8	9	10	--
								Rs.	Rs.	Rs.
Bombay, Baroda and Central India	1932	171	66,893	67,064	2	349	351	29,96,292	4,00,12,016	4,30,08,308
	1933	**172**	**66,599**	**66,771**	**2**	**208**	**210**	**27,94,829**	**3,71,52,633**	**3,99,47,462**
Burma	1932	108	25,207*	25,315*	3	93	96	18,35,342	1,30,05,563	1,48,40,905
	1933	**100**	**24,790**	**24,890**	**3**	**87**	**90**	**17,05,222**	**1,22,73,390**	**1,39,78,612**
E stern Bengal	1932	131*	48,823	48,954*	5	1,223	1,228	22,26,296*	2,37,40,200	2,59,66,496*
	1933	**133**	**45,700**	**45,833**	**2**	**1,196**	**1,198**	**21,05,014**	**2,23,63,554**	**2,44,68,568**
East Indian	1932	314	128,066	128,380	5	2,132	2,137	44,94,198	5,55,69,270	6,00,63,468
	1933	**318**	**123,615**	**123,933**	**1**	**458**	**459**	**43,85,217**	**5,24,68,559**	**5,68,53,776**
Great Indian Peninsula.	1932	225	89,205	89,430	*Nil*	*Nil*	*Nil*	46,60,072*	4,73,15,401*	5,19,75,473*
	1933	**219**	**86,270**	**86,489**	*Nil*	*Nil*	*Nil*	**43,83,816**	**4,44,57,804**	**4,88,41,620**
Jodhpur	1932	20	6,592	6,612	1	159	160	3,49,349	23,28,200	26,77,549
	1933	**21**	**6,702**	**6,723**	*Nil*	**10**	**10**	**3,33,925**	**22,49,809**	**25,83,734**
Madras and Southern Mahratta.	1932	149	52,829*	52,978*	1*	525*	526*	24,92,786*	2,30,16,915*	2,55,09,701*
	1933	**147**	**50,726**	**50,873**	**1**	**375**	**376**	**22,26,714**	**2,15,50,908**	**2,37,77,622**
Nizam's State	1932	49	16,082	16,131	4	544	548	9,39,365	58,13,853	67,53,218
	1933	**52**	**16,044**	**16,096**	**3**	**946**	**949**	**10,14,443**	**59,92,443**	**70,06,886**
North Western	1932	253	108,185*	108,438*	6	758*	764*	49,19,000*	5,86,63,000*	6,35,82,000*
	1933	**266**	**107,524**	**107,790**	**1**	**23**	**24**	**43,85,000**	**5,64,68,000**	**6,08,53,000**
Rohilkund and Kumaon.	1932	15	5,754	5,769	*Nil*	*Nil*	*Nil*	2,51,475	15,87,938	18,39,413
	1933	**15**	**5,367**	**5,382**	*Nil*	*Nil*	*Nil*	**2,16,526**	**15,11,265**	**17,27,791**
South Indian	1932	133*	37,876*	38,009*	9	237*	246*	20,90,873	1,70,26,210	1,91,17,083
	1933	**131**	**36,448**	**36,579**	**3**	**449**	**452**	**20,35,532**	**1,65,39,376**	**1,85,74,908**
TOTAL	1932	1,917*	697,131*	699,048*	39*	8,267*	8,306*	3,33,04,027*	33,08,13,978*	36,41,18,005*
	1933	**1,916**	**675,865**	**677,781**	**16**	**3,765**	**3,781**	**3,13,87,724**	**31,41,24,238**	**34,55,11,962**

NOTE 1.—The figures with asterisk represent revised figures for 1931-32 due to changes made by the railway administrations in the figures published last year.

NOTE 2.—The figures of cost include the salaries and wages of staff, bonus contributions to the provident fund, gratuities, overtime allowances and all other allowances which are of the nature of extra pay and which are not granted to meet some definite expense incurred in the performance of duty, such as travelling allowance.

The above statement shows that the total number of staff on open line on 31st March 1933 was less by 21,267 than on 31st March 1932, while the total number of staff on construction was less by 4,525. The reduction in the total cost of staff during the year 1932-33 as compared with the preceding year was Rs. 186·06 lakhs.

72. Indianisation.—*State-managed Railways.*—The following table gives a summary of the permanent recruitment made for gazetted ranks in the various departments on State-managed Railways during the year under review.

Department.	No. of vacancies which occurred in previous years not filled in those years remaining to be filled.	No. of new appointments created during the year.	No. of vacancies which occurred during the year.	No. of appointments abolished during the year.	No. of net vacancies to be filled.	No. of vacancies not filled up during the year.	No. of vacancies actually filled.	Filled by							
								Europeans.	Indians.						
									Hindus.	Muslims.	Anglo-Indians and Domiciled Europeans.	Sikhs.	Indian Christians.	Other classes.	Total.
1	2	3	4	5	6 (a)	7 (a)	8	9	10	11	12	13	14	15	16
1. Agency	..	..	4	..	4	..	4(b)	..	..	..	..	..	..	..	..
2. Accounts	2	..	..	..	2	2	..	..	..	..	..	..	..	..	..
3. Engineering	..	..	15	..	15	15	..	..	..	..	..	..	..	..	..
4. Transportation (Traffic) and Commercial.	..	1	11	1	11	10	1	..	..	..	1	..	..	..	1
5. Transportation (Power) and Mechanical Engineering.	..	1	10	..	11	5	6	2	1	1	1	..	1	..	4
6. Stores Department.	5	..	1	..	6	6	..	..	..	..	..	..	..	..	..
7. Other Departments.	..	4	8	1	11	7	4	2	1	..	1	..	..	..	2
8. Total { 1932-33	7	6	49	2	60	45	15	4	2	1	3	..	1	..	7
8. Total { 1931-32	7	..	40	105	..	..	33	7	8	1	16	..	..	..	25
9. Percentage of Europeans to number of vacancies filled—															
1932-33							36·4								
1931-32							22·0								
10. Percentage of Indians to number of vacancies filled—															
1932-33							63·6								
1931-32							78·0								

(a) See note 3. (b) See note 4.

NOTE 1.—It is usual to publish this statement in two parts, one showing the permanent vacancies, and the other the total vacancies, whether permanent or temporary, filled during the year. As during the year under report no temporary appointments were made, the statement is published in one part.

NOTE 2.—Since the primary object of this statement is to show the number of vacancies and how they were filled, an officer whose recruitment was arranged for during a particular year has been regarded as having been appointed during that year, even if he happened to join during the ensuing year.

NOTE 3.—As a result of a number of posts being abolished during the year 1931-32 there was an excess of officers in certain departments and consequently some of the vacancies to be filled during the year were taken as a set off against the excess.

NOTE 4.—Since the primary object of this statement is to show the number of new entrants into Gazetted services by race and community, the vacancies in the Agency department which were filled by transfer of existing officers from other departments are for the purpose of columns 9 to 16.

73. It will be noticed from the statement that during the year under review the total number of appointments made in the gazetted ranks on State-managed railways was 11 of which 4 went to Europeans and 7 to Indians, of whom 2 were Hindus, 1 Muslim, 1 Indian Christian and 3 Anglo-Indians and domiciled Europeans. The ratio of Indian to European recruit-

ment was 63·6 to 36·4. The percentage of Indian recruitment in the various departments was :—

Department.	Per cent.
Accounts	...
Engineering	...
Transportation (Traffic) and Commercial	100·0
Transportation (Power) and Mechanical Engineering	66·7
Other Departments	50·0

Among Indian recruits the proportionate recruitment from each community was as shown below :—

	Per cent.
Hindus	28·6
Muslims	14·3
Anglo-Indians and domiciled Europeans	42·8
Indian Christians	14·3

The figures in the statement in paragraph 72 represent recruitment made for gazetted ranks. They exclude promotions from the lower gazetted services to the superior services, but on the other hand include appointments made by promotion from the subordinate ranks to the lower gazetted services. In order to work out the recruitment made for the superior services it would be necessary to include the former and exclude the latter and on this basis the total recruitment for the superior services comes to 10 made up as under :—

Europeans	4
Hindus	2
Muslim	1
Anglo-Indians and domiciled Europeans	2
Indian Christian	1
Total	10

On the basis of these figures the ratio of Indian recruitment for the superior services amounts to 60 per cent. The European recruitment includes 3 officers for the Burma Railways, *viz.*, 2 officers for the Transportation (Power) and Mechanical Engineering Departments and one District Medical Officer, also one subordinate promoted to the Transportation (Traction) Department of the Great Indian Peninsula Railway, who had been officiating in the superior service for a number of years. Under arrangements come to by the Government of India with the Government of Burma, recruitment in India for the superior services on the Burma Railways is confined to persons of Burman domicile and it has not hitherto been possible to obtain the requisite numbers of qualified candidates of Burman domicile to fill vacancies in the superior services on the Burma Railways. As the period under review coincides with a period of depression and retrenchment the number of officers recruited on Indian Railways has been very low only 10 and the inclusion of 3 appointments for the Burma Railways has materially affected the proportion of European and Indian recruitment. Omitting the figures for the Burma Railways the number of European recruitment would have been 1 and of Indian recruitment 6.

74. *Company-managed Railways.*—The following tables give a summary of the recruitment made for the superior services on Company-managed Railways during the year under review : Part I relates to permanent appointments and Part II includes both permanent and temporary appointments. A detailed statement by individual railways will be found in Appendix G of this report.

PART I.

Statement showing the number of PERMANENT vacancies filled in the Superior establishments on (Class I) Company-managed Railways, excluding His Exalted Highness the Nizam's State and Jodhpur Railways during 1932-33.

Department.	No. of vacancies which occurred in previous years not filled in those years remaining to be filled.	No. of new appointments created during the year.	No. of vacancies which occurred during the year.	No. of appointments abolished during the year.	No. of net vacancies to be filled.	No. of vacancies not filled up during the year.	No. of vacancies actually filled.	Filled by: Europeans.	Filled by: Indians: Hindus.	Muslims.	Anglo-Indians and domiciled Europeans.	Sikhs.	Indian Christians.	Other classes.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Agency	2	2	5	1	8	4	3	2	1	..	..	..	..	..	1
2. Accounts	1	..	4	..	5	3	..	..	..	..	..	..	..	..	..
3. Engineering	16	2	15	6	27	22	4	2	2	..	..	..	..	..	2
4. Transportation (Traffic) and Commercial.	10	2	9	4	17	10	6	3	..	..	2	..	1	..	3
5. Mechanical	9	..	2	1	10	5	5	4	1	..	..	..	..	..	1
6. Stores Department	3	..	1	..	4	1	2	1	1	..	..	..	..	..	1
7. Other Departments	5	..	3	..	8	2	6	3	1	1	1	..	..	..	3
8. Total: 1932-33	46	6	39	12	79	*47	26	15	6	1	3	..	1	..	11
8. Total: 1931-32	40	3	56	16	83	(a)44	39	19	11	1	7	..	..	1	20
9. Percentage of Europeans to number of vacancies filled: 1932-33							57·7								
9. Percentage of Europeans to number of vacancies filled: 1931-32							48·7								
10. Percentage of Indians to number of vacancies filled: 1932-33							42·3								
10. Percentage of Indians to number of vacancies filled: 1931-32							51·3								

PART II.

Statement showing the TOTAL number of vacancies filled in the Superior establishments on (Class I) Company-managed Railways, excluding His Exalted Highness the Nizam's State and Jodhpur Railways during 1932-33.

Department.	No. of vacancies which occurred in previous years not filled in those years remaining to be filled.	No. of new appointments created during the year.	No. of vacancies which occurred during the year.	No. of appointments abolished during the year.	No. of net vacancies to be filled.	No. of vacancies not filled up during the year.	No. of vacancies actually filled.	Filled by: Europeans.	Filled by: Indians: Hindus.	Muslims.	Anglo-Indians and domiciled Europeans.	Sikhs.	Indian Christians.	Other classes.	Total.
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Agency	2	2	5	1	8	4	4	2	2	..	..	..	..	..	2
2. Accounts	1	..	4	..	5	3	2	..	1	..	1	..	..	..	2
3. Engineering	20	4	16	19	21	23	—1	—3	1	..	..	1	..	..	2
4. Transportation (Traffic) and Commercial.	11	2	9	5	17	10	6	3	..	..	2	..	1	..	3
5. Mechanical	9	..	2	1	10	5	6	4	2	..	..	..	..	..	2
6. Stores Department	4	..	1	1	4	1	2	1	1	..	..	..	..	..	1
7. Other Departments	6	..	3	..	9	3	6	3	1	1	1	..	..	..	3
8. Total: 1932-33	53	8	40	27	74	49	25	10	8	1	4	1	1	..	15
8. Total: 1931-32	44	7	62	38	75	(b)51	24	12	7	—1	6	..	..	..	12
9. Percentage of Europeans to number of vacancies filled: 1932-33							40·0								
9. Percentage of Europeans to number of vacancies filled: 1931-32							50·0								
10. Percentage of Indians to number of vacancies filled: 1932-33							60·0								
10. Percentage of Indians to number of vacancies filled: 1931-32							50·0								

(*a*) Figures have been revised from 44 to 46 during 1932-33.
(*b*) Figures have been revised from 51 to 53 during 1932-33.
* Excludes six vacancies filled by officers of the temporary Establishment as under:—

Agency	1
Accounts	2
Engineering	1
Transportation and Commercial	1
Stores	1
Total	6

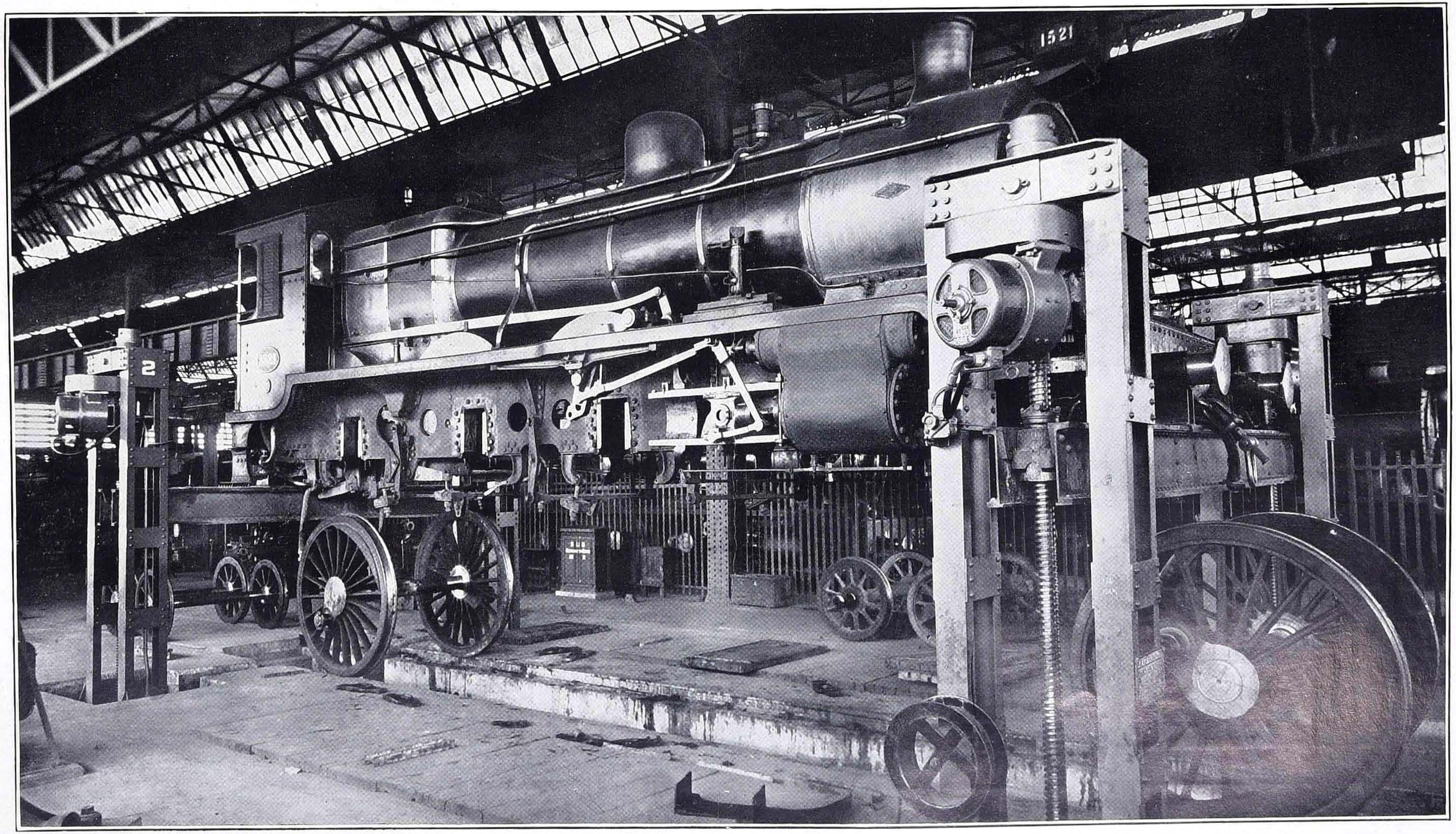
75. It will be observed from Statement Part I that during the year under review the total number of appointments made in the superior service on Company-managed Railways was 26 of which 15 went to Europeans and 11 to Indians, of whom 6 were Hindus, 3 Anglo-Indians and domiciled Europeans, 1 Muslim and 1 Indian Christian. The net total number of vacancies filled, permanent or temporary, was 23 of which 10 went to Europeans. The total actual appointments filled by Indians were 15, of which 8 were Hindus, 1 Muslim, 4 Anglo-Indians and domiciled Europeans, 1 Sikh and 1 Indian Christian. The ratio of Indian to European recruitment was 42·3 to 57·7 in respect of permanent appointments and 60·0 to 40·0 in respect of all appointments, whether permanent or temporary. The percentage of Indian recruitment in the principal departments was :—

	Permanent appointments.	Total appointments, permanent or temporary.
	Per cent.	Per cent.
Accounts	...	100·0
Engineering	50·0	100·0
Transportation (Traffic) and Commercial	50·0	50·0
Transportation (Power) and Mechanical Engineering	20·0	33·3

Among Indian recruits the proportionate recruitment from each community was as shown below :—

	Permanent vacancies.	Total vacancies.
	Per cent.	Per cent.
Hindus	55	53·3
Muslims	9	6·7
Anglo-Indians and domiciled Europeans	27	26·7
Indian Christians	9	6·7
Sikhs	...	6·6

76. *Review of the progress made since 1925.*—The following statements will throw further light on the progress made in Indianisation and in the recruitment of the various communities both on State-managed and Company-managed Railways since 1925, as reflected in the relative strength of Europeans and Indians belonging to the various communities: Part I relates to superior staff and Part II to subordinate staff on scales of pay rising to Rs. 250 and over.



Locomotive Hoist.

PART I.

Statement of gazetted officers on State-managed Railways and Officers of corresponding rank on Company-managed (Class I) Railways (excluding H. E. H. the Nizam's State and Jodhpur Railways) on the 1st April 1925, 31st March 1932 and 31st March 1933.

Name of Railway.	1st April 1925.									31st March 1932.									31st March 1933.								
	Europeans.	Indians.							Total number on the Railway (columns 2 plus 9).	Europeans.	Indians.							Total number on the Railway (columns 11 plus 18).	Europeans.	Indians.							Total number on the Railway (columns 20 plus 27).
		Hindus.	Muslims.	*Anglo-Indians.	*Sikhs.	*Indian Christians.	*Other classes.	Total.			Hindus.	Muslims.	Anglo-Indians and domiciled Europeans.	Sikhs.	Indian Christians.	Other classes.	Total.			Hindus.	Muslims.	Anglo-Indians and domiciled Europeans.	Sikhs.	Indian Christians.	Other classes.	Total.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
State-managed Railways.																											
Burma	90	3	..	..	..	..	12	15	105	90	4	1	9	..	..	7	21	111	82	4	1	9	..	..	7	21	103
Eastern Bengal	79	31	3	..	..	..	12	46	125	72	46	6	7	2	2	1	64	136	70	45	5	10	2	2	1	65	135
East Indian	227	49	12	..	..	..	26	87	314	188	78	11	37	2	2	1	131	319	189	74	13	37	2	2	2	130	319
Great Indian Peninsula	175	18	5	..	..	..	23	46	221	165	29	10	12	..	3	6	60	225	156	32	11	10	..	5	5	63	219
North Western	192	60	13	..	..		28	101	293	149	67	20	11	8	3	1	110	259	138	78	20	14	8	4	..	124	262
Railway Board and Miscellaneous Offices.	59	8	3	..	..	..	14	25	84	45	14	4	7	..	..	1	26	71	42	11	8	5	..	..	2	26	68
TOTAL	822	169	36	..		..	115	320	1,142	709	238	52	83	12	10	17	412	1,121	677	244	58	85	12	13	17	429	1,106
Company-managed Railways.																											
Assam Bengal	52	6	1	..	..	..	2	9	61	41	16	4	9	1	..	..	30	71	42	17	4	8	1	..	..	30	72
Bengal Nagpur	170	27	5	..	..	..	19	51	221	140	43	8	16	2	1	2	72	212	132	40	7	15	2	1	2	67	199
Bengal and North-Western	55	3	1	..	..		..	4	59	58	6	3	1	..	..	..	10	68	59	6	3	2	..	..	..	11	70
Bombay, Baroda and Central India	159	14	..	..	..	..	21	35	194	125	29	2	3	1	3	10	48	173	123	31	3	4	2	3	8	51	174
Madras and Southern Mahratta	122	15	1	..	..	..	6	22	144	106	31	..	8	..	2	3	44	150	103	27	..	8	2	2	4	43	146
Rohilkund and Kumaon	12	1	..	..	..	..	..	1	13	11	2	2	..	..	..	..	4	15	11	2	2	..	..	..	..	4	15
South Indian	93	17	1	..	..	..	3	21	114	79	44	1	7	..	1	1	54	133	77	43	1	8	..	1	..	53	130
TOTAL	663	83	9	..	..	..	51	143	806	560	171	20	44	4	7	16	262	822	547	166	20	45	7	7	14	259	806
GRAND TOTAL	1,485	252	45	..	..	..	166	463	1,948	1,269	409	72	127	16	17	33	674	1,943	1,224	410	78	130	19	20	31	688	1,912

Statement showing the percentages of the relative strength of Europeans and Indians of various communities.

			1925.*	1932.	1933.
Europeans	..	State-managed Railways.	71·98	63·25	61·21
		Company-managed Railways.	82·26	68·13	67·87
		TOTAL	76·23	65·31	64·02
Indians	Hindus	State-managed Railways.	14·80	21·23	22·06
		Company-managed Railways.	10·30	20·80	20·59
		TOTAL	12·94	21·05	21·44
	Muslims	State-managed Railways.	3·15	4·64	5·24
		Company-managed Railways.	1·12	2·43	2·48
		TOTAL	2·31	3·71	4·08
	Anglo-Indians	State-managed Railways.	*	7·40	7·69
		Company-managed Railways.	*	5·35	5·58
		TOTAL	*	6·54	6·80
Indians—*contd.*	Sikhs	State-managed Railways.	*	1·07	1·08
		Company-managed Railways.	*	0·49	0·87
		TOTAL	*	0·82	0·99
	Indian Christians	State-managed Railways.	*	0·89	1·18
		Company-managed Railways.	*	0·85	0·87
		TOTAL	*	0·88	1·05
	Other classes	State-managed Railways.	*10·07	1·52	1·54
		Company-managed Railways.	*6·32	1·95	1·74
		TOTAL	*8·52	1·69	1·62
	TOTAL	State-managed Railways.	28·02	36·75	38·79
		Company-managed Railways.	17·74	31·87	32·13
		TOTAL	23·77	34·69	35·98

* Anglo-Indians, Sikhs, and Indian Christians included in "Other classes" in 1925.

PART II.

Statement of subordinates on scales of pay rising to Rs. 250 per mensem and over on Class I Railways (excluding H. E. H. the Nizam's State and Jodhpur Railways), on the 1st April 1925, 31st March 1932 and 31st March 1933.

Name of Railway.	1st April 1925. Europeans.	Indians. Hindus.	Muslims.	†Anglo-Indians.	†Sikhs.	†Indian Christians.	†Other classes.	Total.	Total number on the Railway (columns 2 *plus* 9).
1	2	3	4	5	6	7	8	9	10
State-managed Railways.									
Burma	28	83	9	..	..	..	198	290	318
Eastern Bengal	143	106	5	..	..	..	163	274	417
East Indian	859	300	25	..	..	..	789	1,114	1,973
Great Indian Peninsula	286	125	29	..	..	..	803	957	1,243
North Western	401	328	123	..	..	..	378	829	1,230
Railway Board and miscellaneous offices.	*	*	*	*	*	*	*	*	*
TOTAL	1,717	942	191	..	..	..	2,331	3,464	5,181
Company-managed Railways.									
Assam Bengal	22	23	4	..	..	..	46	73	95
Bengal Nagpur	333	140	13	..	..	..	403	556	889
Bengal and North-Western	31	15	2	..	..	..	59	76	107
Bombay, Baroda and Central India	155	253	25	..	..	..	506	784	939
Madras and Southern Mahratta	85	31	1	..	..	...	173	205	290
Rohilkund and Kumaon	6	5	1	..	..	..	13	19	25
South Indian	63	73	2	..	..	..	158	233	296
TOTAL	695	540	48	..	..	..	1,358	1,946	2,641
GRAND TOTAL	2,412	1,482	239	..	..	..	3,689	5,410	7,822

Name of Railway.	31st March 1932. Europeans.	Indians. Hindus.	Muslims.	Anglo-Indians and domiciled Europeans.	Sikhs.	Indian Christians.	Other Classes.	Total.	Total number on the Railway (columns 11 *plus* 18).
1	11	12	13	14	15	16	17	18	19
State-managed Railways.									
Burma	27	92	11	249	15	11	38	416	443
Eastern Bengal	78	158	12	176	4	2	5	357	435
East Indian	570	469	46	931	7	10	2	1,465	2,035
Great Indian Peninsula	300	231	35	674	12	80	94	1,126	1,426
North Western	355	306	191	353	91	22	58	1,016	1,371
Railway Board and miscellaneous offices.	3	160	25	32	10	1	10	238	241
TOTAL	1,333	1,416	320	2,415	139	126	202	4,618	5,951
Company-managed Railways.									
Assam Bengal	17	32	3	35	2	1	3	76	93
Bengal Nagpur	236	189	15	403	17	9	3	636	872
Bengal and North-Western	18	17	6	66	1	1	..	91	109
Bombay, Baroda and Central India	129	305	33	368	5	54	110	875	1,004
Madras and Southern Mahratta	88	48	..	178	..	3	7	236	324
Rohilkund and Kumaon	7	3	1	10	..	..	1	15	22
South Indian	38	91	5	167	..	8	1	272	310
TOTAL	533	685	63	1,227	25	76	125	2,201	2,734
GRAND TOTAL	1,866	2,101	383	3,642	164	202	327	6,819	8,685

Name of Railway.	31st March 1933. Europeans.	Indians. Hindus.	Muslims.	Anglo-Indians and domiciled Europeans.	Sikhs.	Indian Christians.	Other classe.	Total.	Total number on the Railway (columns 20 *plus* 27).
1	20	21	22	23	24	25	26	27	28
State-managed Railways.									
Burma	24	90	9	240	14	13	38	404	428
Eastern Bengal	70	147	9	174	3	2	4	339	409
East Indian	518	451	49	909	12	14	5	1,440	1,958
Great Indian Peninsula	270	231	34	647	14	89	89	1,104	1,374
North Western	368	330	184	357	88	14	36	1,009	1,377
Railway Board and miscellaneous offices.	2	153	26	28	10	3	6	226	228
TOTAL	1,252	1,402	311	2,355	141	135	178	4,522	5,774
Company-managed Railways.									
Assam Bengal	17	32	3	37	2	1	3	78	95
Bengal Nagpur	205	197	17	398	13	10	3	638	843
Bengal and North-Western	17	20	9	56	1	1	..	87	104
Bombay, Baroda and Central India	145	304	31	329	4	43	117	828	973
Madras and Southern Mahratta	81	48	..	177	..	4	8	237	318
Rohilkund and Kumaon	6	3	1	9	..	..	..	13	19
South Indian	41	88	6	159	..	7	1	261	302
TOTAL	512	692	67	1,165	20	66	132	2,142	2,654
GRAND TOTAL	1,764	2,094	378	3,520	161	201	310	6,664	8,428

Statement showing the percentages of the relative strength of Europeans and Indians of various communities.

			1925.	1932.	1933.
Europeans		State-managed Railways.	33·14	22·40	21·68
		Company-managed Railways.	26·32	19·50	19·29
		TOTAL	30·84	21·49	20·93
Indians	Hindus	State-managed Railways.	18·18	23·79	24·28
		Company-managed Railways.	20·44	25·05	26·08
		TOTAL	18·95	24·19	24·84
	Muslims	State-managed Railways.	3·69	5·38	5·39
		Company-managed Railways.	1·82	2·30	2·52
		TOTAL	3·05	4·41	4·48
	Anglo-Indians	State-managed Railways.	†	40·58	40·79
		Company-managed Railways.	†	44·88	43·89
		TOTAL	†	41·93	41·77
Indians—*contd.*	Sikhs	State-managed Railways.	†	2·34	2·44
		Company-managed Railways.	†	0·91	0·75
		TOTAL	†	1·89	1·91
	Indian Christians	State-managed Railways.	†	2·12	2·34
		Company-managed Railways.	†	2·78	2·49
		TOTAL	†	2·32	2·39
	Other Classes	State-managed Railways.	†44·99	3·39	3·08
		Company-managed Railways.	†51·42	4·57	4·98
		TOTAL	†47·16	3·77	3·68
	TOTAL	State-managed Railways.	66·86	77·60	78·32
		Company-managed Railways.	73·68	80·50	80·71
		TOTAL	69·16	78·51	79·07

* Not available.

† Anglo-Indians, Sikhs, and Indian Christians included in "Other classes" in 1925.

77. It will be observed that the Indian element in the superior services has risen from 28·02 per cent. on State-managed and 17·74 per cent. on Company-managed Railways in 1925 to 38·79 per cent. on State-managed and 32·13 per cent. on Company-managed Railways in 1933 by a corresponding reduction in the European element. Among the Indians the percentage increase by communities in 1933 as compared with 1925 is shown below :—

—	State-managed.		Company-managed.	
	Percentages.		Percentages.	
	1925.	1933.	1925.	1933.
Hindus	14·80	22·06	10·30	20·59
Muslims	3·15	5·24	1·12	2·48
Anglo-Indians	*	7·69	*	5·58
Sikhs	*	1·08	*	0·87
Indian Christians	*	1·18	*	0·87
Other classes	10·07*	1·54	6·32*	1·74

* Anglo-Indians, Sikhs and Indian Christians included under "other classes" in 1925.

78. Turning to the subordinate staff on scales of pay rising to Rs. 250 per mensem and over, the corresponding figures are as under :—

—	State-managed.		Company-managed.	
	Percentages.		Percentages.	
	1925.	1933.	1925.	1933.
Europeans	33·14	21·68	26·32	19·29
Indians—				
Hindus	18·18	24·28	20·44	26·08
Muslims	3·69	5·39	1·82	2·52
Anglo-Indians	*	40·79	*	43·89
Sikhs	*	2·44	*	0·75
Indian Christians	*	2·34	*	2·49
Other classes	44·99*	3·08	51·42*	4·98
Total Indians	66·86	78·32	73·68	80·71

* Anglo-Indians, Sikhs and Indian Christians included under "other classes" in 1925.

79. Representation of minority communities in Railway Services.— This difficult problem continued to receive attention. It was stated in last year's report that an officer was placed on special duty in March 1931 in connection with the representation of minority communities in the subordinate railway services. The Railway Board's proposals on his recommendations were submitted to the Government of India whose final decision is

awaited. Orders of the Government of India as to a percentage of new appointments made in India being reserved for the redress of marked communal inequalities issued in July 1926, but since early in 1931 there has been practically no new recruitment made to the railway services, so that no rapid change in the representation of any minority community has been possible and, in branches of the service where the number of any community has in the past been low, no considerable and sudden increase in their representation has occurred.

80. Training of staff.—(i) *Superior Staff*.—As stated in the Report for the last year, the Railway Staff College, Dehra Dun, was closed at the end of February 1932. Since then the question as to the most suitable methods to adopt in regard to the training of officers and probationers has been engaging the attention of the Railway Board who had the advantage of discussing this question with the Agents of Class I Railways at Simla in October 1932. The opinion of the majority of the Agents was that, though the Staff College had been closed, lectures should continue to be given to probationers of the Transportation (Traffic) and Commercial Departments. The majority of those present at the time of this discussion agreed that refresher lectures were also of value to officers. The matter is still under the consideration of the Railway Board and it is hoped that a decision would be arrived at at an early date. In the meantime probationers are being given training by the Railways to which they are posted under directions issued by the administration.

(ii) *Area Schools*.—A brief resume of the activities during the year of the Area Schools engaged in the training of railway staff is given below:—

(*a*) *Railway School of Transportation, Chandausi and Asansol Training School* (*East Indian Railway*).—During the year under review the activities of the Transportation School at Chandausi and of the Training School at Asansol continued on the lines hitherto followed. The number of students attending courses shows a slight increase over last year in spite of the fact that further retrenchments were carried out.

During the year 1932-33, courses of instruction were on much the same lines as in the previous year. Owing to the suspension of recruitment there were fewer probationary Assistant Station Master's courses but more refresher courses were held and, compared with 10,295 student days for 391 students in attendance during 1931-32, there were 11,092 student days for 421 students in attendance during 1932-33. The cost per student day was reduced from Rs. 7-9-0 for the year 1931-32 to Rs. 5 for the year under review.

At the Asansol Training School where locomotive running and fitting staff, carriage and wagon staff and switchmen of the Transportation branch are trained, there were fewer grade examinations and instructional courses for running staff but there was an increase in the number of refresher and demonstration courses for all the above classes of staff. The total number of student days during the year 1932-33 was 14,806, as compared with the previous record of 12,537 during the year 1931-32, the cost per student day being Rs. 1-7-0 as in the previous year.

The training of switchmen has been discontinued at Asansol and is now carried out at Chandausi.

(*b*) *Walton Training School, Kot Lakhpat* (*North Western Railway*).—During the year under report this school continued the training of staff for the North Western Railway. The total number attending the school in 1932-33 was 1,230 as compared with 1,302 in the previous year. The reduction is due to the temporary suspension of recruitment.

The training of line staff, both senior and junior, has been actively pursued and it is reported that the efficiency resulting from such training is apparent.

One probationary Assistant Transportation Officer, five Probationer Engineers and two Student Engineers attended the school for various courses and examinations during this period.

81. Improvement in the service conditions of the staff.—(i) *Hours of Employment Regulations.*—The question of the extension of the application of the Hours of Employment Regulations to the Burma and the Company-managed Railways was reviewed by the Board early in January 1933, when it was decided that, in view of the prevailing financial stringency, it would not be possible to extend the application of the Regulations to these railways for the time being. In communicating this decision, these railway administrations were asked not to relax their efforts to apply the provisions of the Regulations where this was possible without incurring additional expenditure, it being pointed out to them at the same time that the present conditions of slack traffic presented opportunities for re-organising work in certain instances so as to achieve this end, and that anything which could be done in this direction would facilitate the more precise application of the Regulations which will be necessary when statutory effect is given to them on these railways. These railway administrations were also asked to report to the Board the action they might find it possible to take in the direction indicated by the Board.

(ii) *Acceleration of payments.*—The question of the speeding up of the payment of wages to staff on railways continued to receive the attention of the Railway Board and the railway administrations. Mention was made in the last report of a system introduced on the Eastern Bengal Railway for the preparation and payment of wages bills so as to ensure that workshop staff received their wages within 8 to 10 days and all other staff within 7 days of the close of the period for which they were earned. With a view to encouraging the extension of such a scheme to other railway administrations, a copy of the report on the introduction of earlier payments on the Eastern Bengal Railway was circulated to principal railway administrations in June 1932. The subject was further examined by the Railway Board in connection with certain recommendations made by the Royal Commission on Labour and a bill to regulate the payment of wages to certain classes of persons employed in industry was introduced in the Legislative Assembly on the 1st February 1933 by the Government of India. This bill aims at securing prompt payment of wages and of regulating deductions from wages of workmen. The scope of the bill is limited, in the first instance, to employees in receipt of less than Rs. 100 a month, the provisions relating to prompt payment of wages being applicable, in the first instance, to workers employed in factories and those relating to deductions being intended for application, in the first instance, to factory workers and railway workers. The bill was circulated for eliciting public opinion, on the adoption of a motion by the Legislative Assembly, on the 14th February 1933, to that effect.

(iii) *Investigation into the system of raising and recovering debits.*—Mention was made in the last report of a system to be tried on the Eastern Bengal Railway under which error sheets of amounts exceeding a certain amount were to be checked by a gazetted officer of the Accounts Department and, if necessary, discussed with a Commercial Officer, a debit being raised only after both are agreed to its correctness. This system was introduced on the Eastern Bengal Railway and continued to be in operation during the period under review. On receipt of a report from the Eastern Bengal Railway on the results of this experiment the question of the continuance of the system on the Eastern Bengal Railway and of the extension of similar or modified schemes to other railways will be considered.

In the last report a reference was also made to the proposed trial, on the North Western Railway, of a Conduct Marks System, with a view to elimination of fines and debits for petty offences. The Agent, North Western Railway, reported that a system of Conduct Marks has been introduced on the Delhi Division with effect from the 1st March 1933. The question of extending the system will be considered after a report has been received from the Agent, North Western Railway, and if it is found that the system has worked successfully during the experimental stage.

82. Welfare.—(i) *Assistance to Railway employees for the education of their children* .—It was stated in the report for the last year that an officer of

the Education Department was placed on special duty to make a detailed estimate of the cost of the introduction of the new rules for the grant of assistance to railway employees towards the education of their children, as well as the cost, as it would be, if the rules were liberalised in certain directions, and further to report on the administration of the schools maintained by the State-managed Railways. This officer was, as stated last year, engaged in his investigation on the East Indian, North Western and Great Indian Peninsula Railways. He completed his investigation on these railways in 1932. His reports on these, as well as on the Eastern Bengal Railway, are still under consideration by the Railway Board.

(ii) *Staff Benefit Fund.*—The staff benefit funds introduced on the State-managed railways with effect from the 1st April 1931, continued to function and, with the establishment of a staff benefit fund on the Madras and Southern Mahratta Railway from the 1st January 1933, all the Company-managed railways have now established staff benefit funds on their railways.

(iii) *Railway Sports.*—The Indian Railways Athletic Association hold annually an athletic tournament and a tournament in one of the field games.

The athletic tournament was held in Delhi on the 23rd March 1933 being competed for by the North Western, Bombay, Baroda and Central India, Bengal Nagpur, Eastern Bengal, East Indian, Great Indian Peninsula, Madras and Southern Mahratta, His Exalted Highness the Nizam's State and South Indian Railways and the Railway Board.

The North Western Railway won the athletic tournament for the fifth year in succession and the Bengal Nagpur Railway were the runners up.

For the field game, a hockey tournament was decided upon and was held in Delhi from 24th to 27th March 1933. The following teams competed—East Indian, Eastern Bengal, His Exalted Highness the Nizam's State, Railway Board, Bombay, Baroda and Central India and North Western.

The North Western Railway, who also won the athletics, won the hockey tournament, the East Indian Railway being the runners up.

83. Report of the Royal Commission on Labour.—It was mentioned in the last report that the Board had been able to formulate provisional conclusions on certain of the recommendations contained in the chapters of the Report of the Royal Commission on Labour concerning railways. During the period under review the examination of the recommendations of the Royal Commission affecting railways continued to engage the attention of the Board and in December 1932, instructions were issued to State-managed railways, with an invitation to Company-managed railways to follow a similar procedure, giving effect to certain recommendations, the chief of which are :—

(i) that necessary arrangements should continue to be made by the railway administrations to make known to all employees and applicants for employment that bribes are in no circumstances to be given and that proof of giving or taking bribes will render employees liable to summary dismissal;

(ii) that the principles embodied in the leave rules should be reviewed from time to time by railway administrations;

(iii) that the claims of low-paid workers to improved wage standards should continue to receive the attention of the railway administrations with due regard to the level of prices and financial considerations;

(iv) that the weekly rest period may be granted to all continuous workers except the running staff and certain categories of the works staff of the Engineering department so far as financial considerations permit and that, pending the extension of the Hours of Employment Regulations to the railway to which they have not yet been applied and the subsequent examination of the reduction of the hours of work of intermittent workers, railway administrations should take the necessary steps to reduce the

hours of work and provide suitable periods of rest in individual cases where humanitarian considerations require such a course;

(v) that railway administrations should continue to give effect to the principle of finding suitable alternative employment in regard to workers declared medically unfit for a particular post;

(vi) that railway administrations should continue to give effect to the existing practice by which records are kept of the temporary service of employees, where practicable, with a view to priority for permanent employment; and

(vii) that on one State-managed railway arrangements should be made for the maintenance of a register for the purpose of checking the turnover in one or possibly two departments, the practical advantages of the maintenance of such registers to be investigated after this experiment had been tried for one year. The East Indian Railway was selected for this experiment.

Other recommendations of the Royal Commission on Labour affecting railways are still under the consideration of the Railway Board.

84. Elimination of Racial Discrimination.—This question continued to receive attention from the Railway Board. Racial discrimination has been practically removed in all directions on the State-managed railways. The position on the Company-managed railways was reviewed during the year and, as a result of that review, the Company-managed railways were again addressed on certain matters in which some element of racial discrimination existed and further reports were called for.

The importance of keeping a close watch on the position and making a periodical review to ensure that racial discrimination is removed both in the spirit and in the letter was impressed on the railway administrations by the Railway Board.

The replies received from the Company-managed railways show that further progress has been made in regard to elimination of racial discrimination. This matter will continue to be examined further by the Railway Board.

85. Economies in Staff charges.—(i) *Reductions in the strength of the subordinate and inferior staff and of workshop employees.*—The retrenchment of staff carried out on all principal railways during 1931 was dealt with at some considerable length in paragraph 88 of last year's report, wherein it was shown that retrenchments by discharges which were suspended (with minor exceptions) in July 1931 were not resumed until June 1932. In a communiqué dated the 6th June 1932, issued by the Government of India, it was announced, *inter alia*, that in view of the continued serious decline in the volume of traffic, the gross earnings and transportation operations of railways, the Government of India had reluctantly decided to authorise the resumption of the retrenchment of staff on railways in which the surplus, according to an estimate made in January 1932, was placed at 7,477, with a further surplus of 4,482 anticipated as likely to arise in the near future. In the same communiqué it was pointed out that these figures were estimates made in January 1932 and that the actual number of surplus staff to be discharged might, in the intervening period, *i.e.*, between January and June 1932, have undergone modification, *e.g.*, by normal wastage and voluntary retirements. In authorising the resumption of retrenchment in this communiqué, the following instructions were laid down for the guidance of State-managed railways, with an invitation to Company-managed railways to follow a similar procedure:—

(*a*) that recognised Unions should be advised of the number of employees of each category in each department or division and workshop, which it was intended to discharge if and where such number was considerably in excess of the number previously advised to them, with a view to any representations which such unions may make within a fortnight being considered by administrations before discharging the additional number;

(*b*) that where no recognised Unions existed in respect of such surplus staff, action should be taken by railway administrations to make known the intended discharges to the employees, unless this had already been done at an earlier stage, in order that they may have an opportunity of submitting representations themselves;

(*c*) that in the retrenchment authorised in the said communiqué of 6th June, staff be discharged in accordance with the rule of length of service within each appropriate unit subject to such adjustments as may be necessary to maintain the proportions of the various communities approximately at the levels at which they stood prior to the retrenchment of 1931;

(*d*) that railway administrations should consider the desirability of framing supplementary instructions with a view to ensuring uniformity of procedure within each railway;

(*e*) that railway administrations should appoint a committee or committees to consider appeals from employees discharged or demoted which are submitted on the ground that such discharge or demotion is in contravention of the instructions laid down by the Railway Board or the Agent, such appeals being allowed to be submitted through the Unions if the appellants so chose;

(*f*) that with a view to reducing the number of employees to be discharged, Agents of railways have the discretionary power of adopting other expedients for spreading work, as far as may be practicable having regard to the conditions obtaining on each railway.

It was also pointed out in the same communiqué that the Government of India felt considerable doubt regarding the desirability of continuing to apply the principle of discharging men on the rule of length of service to further block retrenchments which might become necessary in future and that they proposed to postpone a decision on the point until after discussion with the All-India Railwaymen's Federation.

Following the issue of the communiqué of the 6th June 1932, detailed instructions were issued to railway administrations regarding the special terms to be given to various categories of staff for voluntary retirement and for discharge of surplus staff. The terms for voluntary retirement offered to staff in inferior service, labourers and workshop employees included the offer of one month's pay as bonus, *plus*, in the case of those who had completed 3 years continuous service, a bonus equal to the leave salary which they would draw if they were given leave on full pay due to them, subject to a minimum of half a month's pay and a maximum of 20 days' pay, certain provisions of the Gratuity and Provident Fund rules being also relaxed in their favour. The terms to be given to such staff on their discharge from service were somewhat more liberal than the terms usually given to such staff on discharge. In the case of staff other than those in inferior service, or other than labourers and workshop employees, one month's pay as bonus or, at their option, leave due and admissible, other than leave on medical certificate or urgent private affairs, were offered on voluntary retirement, certain provisions of the Gratuity and Provident Fund rules being also relaxed in their favour, while, in the case of discharge of such staff, they were given the option to take a month's pay in lieu of notice or to take the leave due and admissible, other than leave on medical certificate or urgent private affairs, with somewhat fewer relaxations of the Gratuity and Provident Fund rules than those allowed to them in connection with voluntary retirement. Settlement passes on the home line and on foreign lines, with the consent of the railways concerned and in accordance with any reciprocal arrangements which might be entered into with foreign railways, were allowed to all staff both on voluntary retirement and on their discharge from service. These terms for voluntary retirement of staff were allowed to remain in force on all railways up to the 31st July 1932, in units in which there was a surplus, and up to the 31st October 1932, in units in which there was no surplus but where there was a waiting list of men

discharged. The dates for voluntary retirement of surplus staff were, at the request of individual railway administrations, extended beyond the 31st July 1932. The retrenchment effected by railways after the issue of the communiqué of 6th June 1932 was reviewed early in September 1932 and it was found that, excluding an estimated surplus of approximately 2,000 employees on the Bengal Nagpur Railway and 400 in the Ajmere workshops of the Bombay, Baroda and Central India Railway, the total number of staff to be discharged was 1,866 which figure did not take into account 710 employees in the Bombay division of the Great Indian Peninsula Railway who were expected to become surplus and whom the Agent of the Great Indian Peninsula Railway was endeavouring to absorb by interdivisional transfers. The number of voluntary retirements on all railways up to the 1st week of September 1932 was about 4,250, from which it will be seen that, out of the total number of 7,477 employees estimated as likely to be surplus in January 1932 with a prospect of a further surplus of 4,482 employees, the number to be discharged was relatively low, as a result largely of the offer of special terms for voluntary retirement, of normal wastage, and the adoption of other expedients for spreading work. The above figures of staff discharged exclude 342 workshop employees discharged by the Bengal and North-Western and Rohilkund and Kumaon Railways in May 1932, *i.e.*, before the issue of the communiqué of the 6th June 1932 referred to above, following a protest by the workmen against short-time working.

(ii) *Emergency cut in pay.*—Mention was made in the last year's report of the emergency reduction in pay of Government servants including those of the Railway Department not exceeding 10 per cent. Under the orders of the Government of India, this reduction applied to pay earned up to 31st March 1933. During the year under review it was decided that an emergency reduction in pay not exceeding 5 per cent. should apply during 1933-34 in respect of all Government servants including those of the Railway Department.

Company-managed railways have adopted the same procedure.

(iii) *Revision of the scales of pay of future entrants into the Superior and Subordinate services.*—During the year under review, the Railway Board formulated certain proposals in regard to revised scales of pay for future entrants into the Superior Services and these received the approval of the Secretary of State for India. It is intended that the revised scales of pay should be introduced during 1933-34. The revision of the scales of pay for Subordinate services is still under examination.

86. Meetings with the All-India Railwaymen's Federation.—During the period under review the Railway Board met the representatives of the All-India Railwaymen's Federation on two occasions, once in June 1932 and a second time on the 1st March 1933. The main subjects discussed at the meeting held in June related to staff retrenchment on railways and the Government's decisions on the Report of the Court of Enquiry appointed to investigate into the retrenchment carried out on railways in 1931, while the recommendation of the Royal Commission on Labour relating to the setting up of a Joint Standing Machinery for the settlement of disputes on railways was the most important subject discussed at the meeting held in March 1933. The suggestions put forward by the Federation have been under consideration by the Railway Board.

87. Court of Enquiry.—Mention was made in the last report of the recommendation of the Court of Enquiry regarding two lists, List A recommending the reinstatement of 80 men and List B suggesting the re-examination of 68 cases with a view to reinstatement of deserving persons whose names were contained in paragraphs 266 to 279 of its report and of the Government of India's decision accepting the said recommendation of the Court of Enquiry and of the instructions issued to the Agents of State-managed railways and the invitation to the Agents of Company-managed railways to adopt a similar course. The Report of the Court of Enquiry and the Government's decisions on its recommendations came up for discussion with the All-India Railwaymen's Federation at the fifth half-yearly meeting held in June

1932, when the Federation commented on the fact that, while accepting the Court's recommendation for the reinstatement of certain persons, the Government of India had reserved for further consideration the cases of persons discharged or demoted otherwise than as a measure of retrenchment. In response to this representation of the Federation, the Chief Commissioner of Railways stated that, so far as the State-managed railways were concerned, such cases would be few and that every such case would receive his personal attention, while with regard to Company-managed railways the Agents would be invited to follow a similar procedure. In accordance with the undertaking given to the Federation by the Chief Commissioner of Railways the cases of persons discharged or demoted otherwise than as a measure of retrenchment referred to the Board by railway administrations were examined by the Board and received the personal consideration of the Chief Commissioner of Railways. The other recommendations of the Court of Enquiry relating to the principles to be applied in connection with the selection of personnel on future occasions of block retrenchments on railways were accepted provisionally so far as impending retrenchments were concerned.

88. Madras and Southern Mahratta Railway Strike.—In connection with the retrenchment carried out on all principal railways following on the recent considerable decrease in traffic, the Madras and Southern Mahratta Railway found, during the latter half of 1932, that they had a surplus of some 700 workshop employees. In order to avoid discharging these men they announced certain increases in short time working. The Madras and Southern Mahratta Railway Employees' Union challenged the figure of surplus staff and, after certain negotiations, declared a strike, in the Perambur Mechanical workshops of the Madras and Southern Mahratta Railway, from the morning of the 24th October 1932, as a protest against the increased short time working to be introduced in the said workshops from the 21st October. The strike began on the morning of the 24th October 1932, in the Perambur workshops and spread to the Arkonam Engineering workshops on the 3rd November 1932, and to the Hubli workshops on the 19th November 1932. The bulk of the staff in the Perambur workshops and in the Arkonam workshops were on strike while rather less than half of the men of the Hubli workshops were on strike. The strike continued from the 24th October 1932 without any material abatement and on the 18th December 1932 a Committee was convened by the Sheriff of Madras consisting of prominent citizens, under the chairmanship of Mr. F. E. James, with a view to effect a settlement. The Committee succeeded in framing terms for a settlement which were accepted by both parties and the terms of settlement were published on the 23rd December 1932. Unfortunately, the dispute was prolonged on account of differences of opinion as to the interpretation of the terms of settlement regarding the exclusion of certain workmen by the Administration at Arkonam and Hubli workshops and the Madras and Southern Mahratta Railway Employees' Union advised the men not to go back to work on account of an alleged breach of the terms of settlement on the part of the Agent, Madras and Southern Mahratta Railway. A communiqué was issued by the Agent, Madras and Southern Mahratta Railway on the 27th December 1932, in which the Agent stated that the necessity for excluding certain workmen at Arkonam and at Hubli had been made clear by him to the Citizens' Committee, that he had intimated that the administration would not go back on the action taken in this respect and that while information to this effect had not actually been included in the terms of settlement, the Agent had pointed this out to the Committee and had received an assurance from the Committee that the position regarding the exclusion of certain workmen at Arkonam and Hubli had already been made clear and accepted. The Citizens' Committee re-assembled on the 2nd January 1933 and made further efforts to bring the parties to an agreed conclusion but the Committee abandoned their efforts on the 5th January 1933 owing to the unwillingness of the Union to withdraw the allegation of a breach of the terms of the settlement by the Agent, Madras and Southern Mahratta Railway. The Committee issued a communiqué on the 5th January 1933 explaining the position as it stood on that date, affirm-

ing that there had been no breach of the settlement by the Agent, and that the charges levelled against him had made a settlement of the outstanding issues more difficult. As a rejoinder to the communiqué issued on the 5th January by the Citizens' Committee the Union issued a statement to the Press on the 6th January 1933 which in turn was followed by a further communiqué from the Citizens' Committee on the 7th January 1933. Subsequently the strike was called off by a resolution passed by the Central Council of the Madras and Southern Mahratta Railway Employees' Union, on the 7th January 1933 accepting the terms of the settlement arrived at by the Committee, but affirming that in their opinion the terms of settlement involved the reinstatement of all men at Arakonam and Hubli and that further action would be taken in that connection.

CHAPTER VII.

MISCELLANEOUS.

89. Passenger train services and travel amenities.—From the financial aspect, the year under review proved to be worse than the previous year, which was in itself none too prosperous, but improvements in passenger train organisation and station arrangements continued to receive the careful attention of Railway administrations. The programme for providing up-to-date coaching stock and the carrying out of improvements to the existing stock and such steps as the provision of cool drinking water to passengers, restaurant cars, refreshment rooms and catering arrangements, waiting room accommodation and various other minor details such as the provision of benches in station platforms and waiting halls, city booking offices, etc., which go to ensure the comfort of passengers, continued to receive adequate attention of railways, in spite of the unrelieved financial stringency. In the following paragraphs, the measures, adopted by the principal railways during the year under review, are briefly outlined :—

(i) *Train Services.*

Assam Bengal Railway.—Due to the introduction of an additional mixed train each way between Tinsukia and Pandu from February 1933, the mixed train mileage was increased from 7,749 on 31st March 1932 to 8,679 on 31st March 1933.

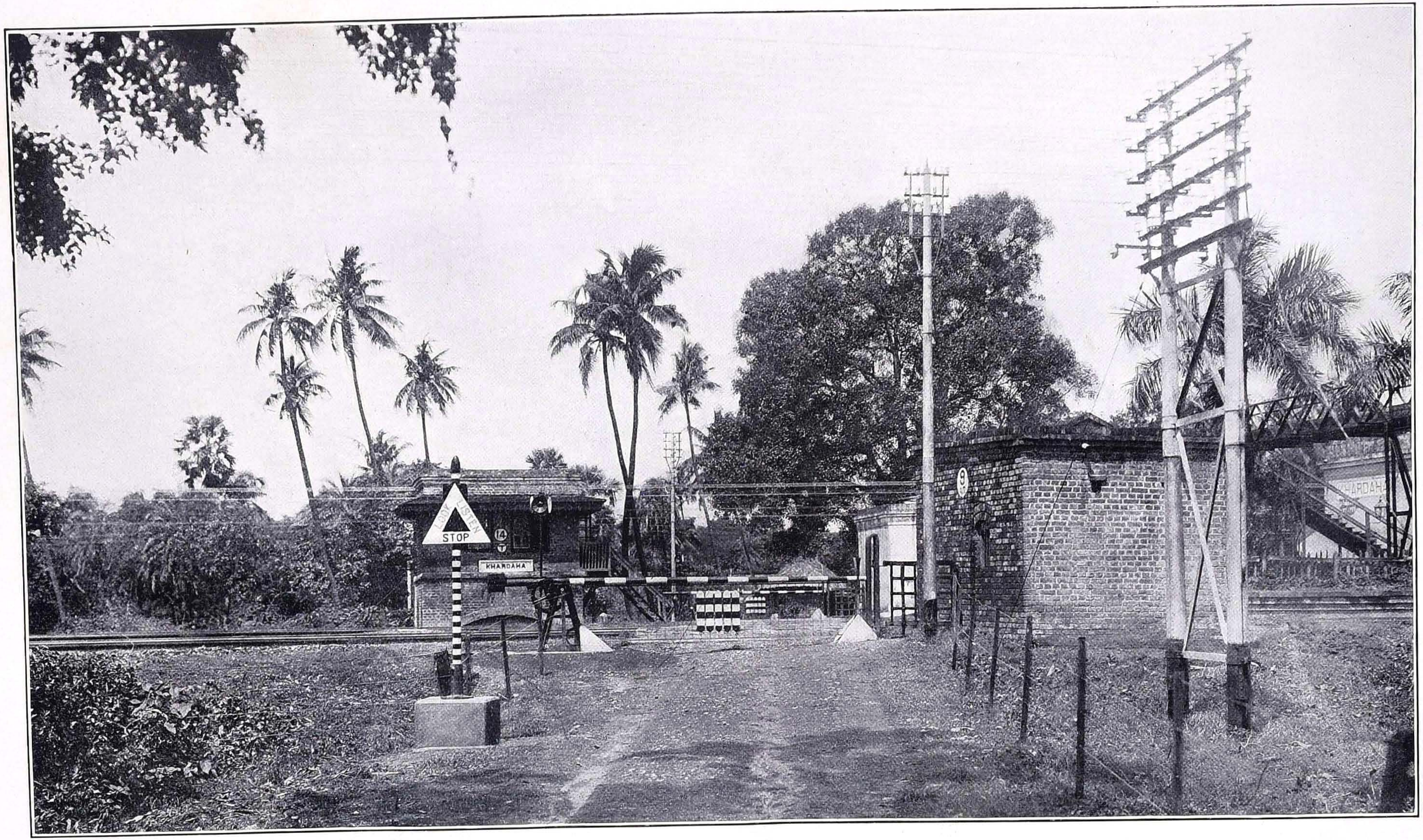
Bengal and North-Western Railway.—From March 1933 Nos. 1 Up and 2 Down Express trains were extended to run through to Amingaon on the Eastern Bengal Railway. One up and one down trains were diverted *viâ* Muzaffarpur and Samastipur instead of *viâ* the main Line. One passenger train each way was introduced between Gonda and Naipalganj Road. These changes resulted in an average daily increase of 113 train miles.

Bengal Nagpur Railway.—A later departure from Howrah by 2 hours 12 minutes and an earlier arrival at Howrah by 55 minutes of the Madras Mails were arranged in the interest of the business community. Two passenger trains between Bilaspur and Katni were accelerated by nearly 1½ hours and about 2 hours respectively. Nagpur Howrah Passenger was accelerated by 2 hours 9 minutes thus facilitating a corresponding later start from Nagpur. The daily train mileage on the broad and narrow gauge sections of this railway system has increased by 15 and 139 miles respectively.

Bombay, Baroda and Central India Railway.—The train miles in 1932-33 as compared with 1931-32 have decreased by 228½ miles on the broad gauge and increased by 120½ miles on the metre gauge. For the convenience of the travelling public, the following changes in passenger train services were made :—

Broad Gauge.—Owing to the arrival of the P. & O. Mail Steamers in Bombay on Thursday evenings instead of on Friday mornings, the time of departure of the Frontier Mail, Gujrat Mail, Kathiawar Mail and Delhi Express from Bombay Central was altered from October 1932. An additional train each way was introduced on the Nadiad-Kapadvanj section. On the other hand owing to a serious fire in the Bandra sub-station in May 1932, a restricted electric train service was introduced from June 1932.

Metre Gauge.—On the metre gauge, one mixed and one local passenger trains running between Rewari and Narnaul were extended to run as fast passenger trains to and from Reengus. 32 down passenger on the Malwa section was timed to arrive at Ajmer at 10-5 instead of 11 hours, so as to give an additional connection with the main line No. 5 Up passenger. Nos. 23 Up and 24 Down fast passengers were cancelled between Bhatinda and Sirsa and these trains were split up to run as locals between Sirsa-Hissar and



Automatic Level-crossing Barriers at Khardah "Lowered."

Hissar-Rewari with a view to facilitate the attendance at courts, etc., at Sirsa and Hissar by the local passengers. Two mixed trains running between Garhi Harsaru and Farukhnagar were extended to run from and to Delhi, two mixed trains running between Cawnpore Central and Kaimganj were extended to run from and to Khasganj Junction and two mixed trains running between Fatehgarh and Kaimganj were cancelled. The afternoon trip of the sentinel service from Ajmer to Kishangarh and back was cancelled and it was run to and from Nasirabad instead. Two shuttle trains between Nandol Dehgam and Ahmedabad were introduced.

Burma Railways.—With the use of YC engines, it was possible to accelerate considerably the speed of mail trains, the time taken between Rangoon and Mandalay being shortened by over two hours. A fast local train service of one train each way between Penwegon and Toungoo, was introduced in order to provide a better service and also to counteract the intense motor bus competition. In order to provide an improved service and to combat the motor bus competition important alterations were also made in the local service trains. A local mixed train was cancelled between Pegu and Pyuntaza and a new train was put on to run from Pegu to Toungoo and another from Toungoo to Pyuntaza. Four suburban trains running between Rangoon and Wanetchaung, and Rangoon and Insein were cancelled and one train each way was introduced between Rangoon and Thingangyun for the convenience of passengers returning home after office hours.

Eastern Bengal Railway.—Owing to decrease in passenger traffic train services except mail and express, were reduced generally.

On the broad gauge the number of trains running on the Calcutta-Budge Budge section was, however, increased in order to counteract the growing bus competition in that region.

On the metre gauge, certain mixed trains were converted into passenger trains and a through train was introduced from Amingaon to Lucknow for the convenience of passengers travelling from Assam and the United Provinces; a connecting train between Parbatipur and Katihar being also introduced.

East Indian Railway.—The total mileage of mail, express and other passenger trains including mixed trains and suburban trains and shuttle services was 1,290,491 during March 1933 as compared with 1,269,008 in March 1932, or an increase of 59 miles per day.

Great Indian Peninsula Railway.—Owing to the policy of cancelling uneconomical trains and instituting new trains which should prove more convenient to the travelling public, many changes in the train services on both the broad and narrow gauges were introduced. On the broad gauge two mail and express trains and four mixed trains were taken off being counterbalanced by an increase of six other passenger trains on 31st March 1933 as compared with 31st March 1932.

The corresponding change in the total train miles (steam and electric) run was as follows :—

	31st March 1932.	31st March 1933.	Difference.
Mail and Express . . .	13,916	13,756	−160
Other passenger trains .	14,951	16,244	+1,293
Mixed trains	1,520	1,350	−170

Jodhpur Railway.—Owing to re-alignment of the Degana-Sujangarh section, two mixed trains between Sujangarh and Ladnun were cancelled.

Madras and Southern Mahratta Railway.—The passenger including mail and express and mixed train miles on 31st March 1933 as compared with those on the 31st March 1932 show an increase of 580 on the broad gauge and 516 on the metre gauge.

The following are the important changes in the train services :—

Broad gauge.—One passenger train was extended from Arkonam to Madras, another from Renigunta to Arkonam, another from Arkonam to

Katpadi, one each way between Rajahmundry and Cocanada and Madras and Gudur respectively. In addition two passenger trains were scheduled to run between Arkonam and Renigunta and Katpadi and Arkonam, and two more were put on the Nidadavolu-Narsapur and Cocanada-Kotipalle branches. On the Madras suburban section, a few additional trains were put on.

Metre gauge.—The destination of eight passenger and four mixed trains was extended, the former to Bijapur, Bagalkot, Tumkur, Arsikere, Hubli, Dharwar, Pakala and Renigunta respectively and the latter to Hubli, Harihar, Narasaraopet and Vinukonda respectively. Further one express train each way between Poona and Kolhapur, two passenger trains between Mormugao and Sanvordem were introduced, in addition to two mixed trains between Bellary and Rayadrug, and Bezwada and Donakonda.

His Exalted Highness the Nizam's State Railway.—Broad Gauge.—There was a decrease in the mail and express train mileage due to the cancellation of two express trains on the Dornakal-Bezwada section and also due to the classification of express trains being withdrawn except in the case of the grand trunk express trains, resulting however in an increase in other passenger trains. On certain sections express and passenger trains were converted into mixed trains and two passenger trains between Secunderabad and Wadi were cancelled. The mixed train service between Secunderabad-Mohamadabad-Bidar was extended to and from Purli-Vaijnath. An additional mixed train was put in service between Vikarabad and Bhalki.

Metre gauge.—Passenger trains were converted to mixed trains on certain sections as an economy measure. The increase in the train mileage, except suburban, was due to the running of through mixed trains between Hingoli and Purli-Vaijnath, which provides an additional train each way on the Purna-Parbhani section. Due to drop in traffic the steam coach service between Basmathnagar-Nander-Parbhani was cancelled.

North Western Railway.—There was an increase of 46 passenger and mixed trains on the broad gauge and 6 on the narrow gauge on the 31st March 1933 as compared with those on 31st March 1932, thus resulting in an increase of 621 and 184 train miles on broad and narrow gauges respectively. The increases were distributed as follows :—

	Number of trains run.		Train miles.	
	Broad gauge.	*Narrow gauge.*	*Broad gauge.*	*Narrow gauge.*
Mail and Express trains	+6	...	+2,885	...
Other passenger trains	+12	-3	-5,550	-292
Mixed trains	+29	+5	+3,250	+468
Shuttle trains	-1	+4	+36	+8
Total	+46	+6	+621	+184

South Indian Railway.—In addition to the trains introduced on the newly opened Pollachi Palghat branch, 20 additional trains on the metre gauge and 14 on the broad gauge were introduced for the convenience of passengers. In addition the destinations of 23 trains on the metre gauge and two trains on the broad gauge were extended during the year. This resulted in an increase per day of 184 mixed train miles, 14 electric suburban train miles and 246 shuttle train miles other than suburban. Owing to the cancellation of certain unremunerative trains, the number of train miles per day at the close of the year was however about the same as that at the end of the previous year.

(ii) *Improvements in the design of and accommodation in passenger carriages.*

Assam Bengal Railway.—All passenger vehicles were completely fitted with electric lights. Out of 509 third and Intermediate class carriages,

including composites, 496 were fitted with latrines. Of the remaining 13 carriages, 3 have got latrines only in the ladies compartments. Of the 496 carriages fitted with latrines, 490 are provided with water tanks.

Bengal and North-Western Railway.—Hooks were provided in the latrines of intermediate class carriages and electric lights provided in the latrines of new bogie third class carriages.

Bombay, Baroda and Central India Railway.—The policy of replacing old types of vehicles by modern electrically lit stock of the latest standard and the elimination of four-wheeled stock, was continued. The new type of lower class coaches was provided with larger latrines and those in the existing coaches were improved. The latrines of all lower class carriages were provided with electric lights, washing taps and coat hooks and flushing arrangements were made in the latrine. The work of converting gas lit stock to electrically lit stock was completed during the year. In first class carriages reading lamps were fitted over each berth and the number of fans was increased from two to three in large compartments, and from one to two in coupe compartments. Combined shower and needle baths were also provided.

Eastern Bengal Railway.—A rake of six bogies, fitted electrically was introduced on the narrow gauge, on which four-wheeled stock only was in service previously. High power lamps were substituted in existing passenger stock, increasing the light effect by 25 per cent. in the upper and by 75 per cent. in the lower class carriages. Latrines were provided in servants' compartments of upper class carriages and coat hooks and enamelled pans were fitted in the latrines of lower class carriages of metre gauge. Switches for lights in upper class carriages were fixed near the doors to facilitate the lighting up of compartments on entry. By replacing the old stock on the line and changing or adding to the seating arrangements, the total accommodation was increased by 229 seats in the upper and 5,395 in the lower classes.

East Indian Railway.—Eleven bogie composite first and second class carriages fitted with latrines in the servants' compartment were placed on the line during the year 1932-33.

Great Indian Peninsula Railway.—Five first and second class composite bogies with servants' compartments, three third, brake and luggage bogies, one bogie third, brake, luggage and post and three restaurant cars were built to standard designs. The upper class composites were provided with adequate number of fans and lights and the servants' compartments with latrines. The four third class composites were adequately lighted.

Jodhpur Railway.—Electric lights were fitted in the latrines of 3rd class carriages and latrines of 16 third class carriages were enlarged.

Madras and Southern Mahratta Railway.—In addition to the roof or side ventilators, sloping shutters were provided in latrines with a view to improve ventilation.

His Exalted Highness the Nizam's State Railway.—Thirty-seven bogies and two ordinary and twenty-nine bogies and one ordinary carriage on the broad and metre gauges respectively, were electrically equipped and the work of electrically equipping the remaining stock was in progress. In three third class carriages on the metre gauge and two third class and two second class carriages and one brake and third class on the broad gauge, the flat flame gas burners were replaced with incandescent burners. Cast iron hooks, corner shelves and inside bolts were provided in the latrines of third class carriages.

North Western Railway.—The provision of improved wider type latrines with higher capacity water tanks in lower class carriages and the replacement of canvas seat cushions with those of imitation leather continued to be carried out. The conversion of passenger stock from gas to electric lighting

was nearly completed. In the servants' compartments of fifty-five upper class carriages, latrines were provided. Small shelves were fitted in latrines of fifty-seven I. R. S. lower class carriages. Latrines in seventeen lower class bogies were enlarged and those in fifty third class carriages were also improved.

South Indian Railway.—Eleven bogie first and second composites, three bogie third and three bogie brake van and third broad gauge carriages, one bogie first, one bogie first and third composite and three bogie third class metre gauge carriages, for service on the Nilgiri Railway, were constructed and placed on the line. All the carriages were built to the latest standard designs and provided with up to date fittings and appliances with a view to afford all necessary convenience to passengers. Separate accommodation for ladies was provided in fifteen metre gauge third class bogies and indication boards, suitable for illumination at night, were fitted to the ladies' compartments in seventeen third class metre gauge carriages. Night lights were provided in the upper class compartments of six broad gauge carriages.

(iii) *Supply of drinking water.*

Assam Bengal Railway.—In addition to the provision of taps, filters and chatties of chlorinated water at stations, several watermen were employed at important stations to supply clean chlorinated water to passengers in trains. One ground tank was constructed at Gomdandi and a tube-well sunk at Jinardi.

Bengal and North-Western Railway.—During the hot season 92 extra watermen were employed in addition to the permanent strength of 169 men. Six additional water carts were under construction for supply to certain important junctions which are expected to be issued shortly.

Bengal Nagpur Railway.—179 permanent watermen with an additional 94 temporary hot weather staff, were in service on 31st March 1933, as compared with 181 and 88 respectively on the corresponding day of 1932. Two-wheeled receptacles were provided to watermen at several stations to enable them to supply clean and cool drinking water to the travelling public. Water storage shelters were also provided at many stations. A pucca water shed was also provided at Tumsar Road.

Bombay, Baroda and Central India Railway.—The system of concentrating Hindu watermen at large stations, where trains stop for ten minutes or more, in order to afford greater opportunities to serve the public satisfactorily, was continued during the year. As in previous years, travelling Hindu watermen were employed on trains, in addition to the Hindu watermen and bhisties employed all the year round at stations. During the hot weather, extra watermen and bhisties were employed at stations, where necessary. A shed over the drinking water tank at Rutlam, two sleeper water huts each at Indore, Kalakund and Reengus, were provided. Two hydrants on the platform at Shamgarh, one at Amalner were installed. A separate connection to the passenger shed taps was provided at Rewari.

Burma Railways.—20 permanent watermen at thirteen stations and 6 temporary watermen at 5 stations for the hot weather were in service for supplying drinking water to passengers.

Eastern Bengal Railway.—Tube wells were provided at Lalmanirhat, Guma, Putimari, Tihu and Basugaon and an additional water tap on the platform at Bonarpara. A masonry scoop tank was constructed in the waiting hall at Dinajpur.

East Indian Railway.—A well for the supply of drinking water was provided at Kundangunj. Hindu watermen and bhisties were permanently employed at many stations to supply drinking water to passengers. During hot weather months additional Hindu watermen and bhisties were concentrated at central points and earthen ghurras were provided in order to keep water cool. At important stations wooden cages were placed in cool spots and water stored in them in pots.

Great Indian Peninsula Railway.—Water cages for Hindus and Mohammadans were provided at Bodwad and Digras. One stand with chatties on the Amraoti platform at Badnera, separate drinking water arrangements for Hindus and Mohammadans at Shahabad and water taps on the platforms at Boroti and Ghangapur were provided.

Madras and Southern Mahratta Railway.—Water taps were provided at Mulanur and Bugganapalli. Arrangements for the supply of drinking water to passengers at stations were continued, as in previous years, with satisfactory results.

His Exalted Highness the Nizam's State Railway.—One end third class compartment was reserved for a waterman on all express, passenger and mixed trains for the supply of drinking water to passengers during hot weather, at each station throughout the journey.

North Western Railway.—New tube wells were installed and hand pumps provided for the supply of drinking water to passengers and the Railway staff. Wherever necessary, extra watermen were posted at stations during the hot weather and hand barrows arranged at principal stations. Travelling watermen were also provided on trains on certain sections. Water huts of standard type were built at Sibi to provide cool drinking water during the hot weather and wherever necessary, ghara shelters and ghara stands were also provided at station platforms.

(iv) *Restaurant car services and refreshment rooms.*

Assam Bengal Railway.—Of the two restaurant cars one ran regularly on the Up and Down Assam Mails between Lumding and Manipur Road and the other was kept in reserve for relief purposes and for use on special occasions. In addition there were also 17 refreshment rooms at various stations.

Bengal and North-Western Railway.—The 15 refreshment rooms for the travelling public generally and those for Hindus and Mohammadans at 9 stations, which existed during the last year, continued to cater for the travelling public.

Bengal Nagpur Railway.—The restaurant car services and refreshment rooms for the travelling public and those for Hindus and Mohammadans, in operation last year, were continued without any alteration.

Bombay, Baroda and Central India Railway—Broad Gauge.—An Indian dining car built specially for the use of second and third class passengers on excursion and pilgrim specials, continued to be in service. The popularity gained in previous years by the arrangements for providing hot meals for Hindus and Mahommadans on the Delhi and Kathiawar Express was maintained under the supervision of the special Indian Catering Inspector and surprise checks by Medical Officers. On the main line mail trains between Ajmer and Ahmedabad and the express trains between Delhi and Ahmedabad, the combined bogie composite first and second and diner (of European style) continued to run. The European refreshment room at Shamgarh was reopened. One additional refreshment room for the travelling public generally was provided on the broad gauge.

Burma Railways.—A dining car was run between Thazi and Lebyin for the convenience of upper class passengers. Twenty refreshment rooms including the two ferry steamers at Sagaing and Henzada were in service. Tea rooms were opened at Taungdwingyi raising the total of tea rooms to 21. The tea rooms at Martaban, which were closed down in April 1931, were leased to a contractor for the supply of light refreshments.

Eastern Bengal Railway.—Restaurant cars for upper class passengers were run on two mail trains between Calcutta and Parbatipur. There were in service 18 upper class refreshment rooms for the travelling public generally and 15 Hindu and 9 Mahommadan refreshment rooms.

East Indian Railway.—Dining cars for the use of the travelling public generally were run on all important mail and express trains. All the 34 refreshment rooms for the travelling public generally and 13 Hindu and 12 Mahommadan refreshment rooms which were open during the previous years continued to function during the year. In addition one Mohammadan refreshment room at Hapur and another at Barabanki were opened.

Great Indian Peninsula Railway.—Restaurant car services for the travelling public generally were run on important mail and express trains between Bombay and Nagpur, Bombay and Delhi, Bombay and Chheoki, Bombay and Poona, Dhond and Raichur, Bombay and Sholapur and Wadi and Raichur. On the Poona mails, a buffet compartment to serve refreshment for upper class passengers and another for lower class passengers, were also run. A buffet car to serve light refreshments and vegetarian meals for both Hindus and Mahommadans continued to run on the Grand Trunk Express trains between Delhi and Balharshah. A compartment was allotted on Nos. 19 Down and 20 Up for the supply of tea, coffee, fruits and sweetmeats. There were in all 40 refreshment rooms, of which 35 were for the travelling public generally and 5 for Hindus and Mahommadans.

Madras and Southern Mahratta Railway.—On the broad gauge restaurant cars were run on important mail and express trains between Madras and Bangalore, Madras and Gudur, Bezwada and Waltair, Guntakal and Cuddapah and Guntakal and Yerraguntla. During the beginning of the year restaurant car services were withdrawn from the Bombay Express between Madras and Renigunta and arrangements were made to serve breakfast and lunch in baskets at Arkonam and Renigunta respectively, but the cars were re-introduced on these trains from 1st September 1932.

On the metre gauge restaurant cars were run on mail trains, throughout the year, between Chickjajur and Miraj, Poona and Jejuri and Guntakal and Dharmavaram.

Indian refreshment cars were run on important passenger and express trains between Madras and Bangalore city and Madras and Bezwada on the broad gauge and between Bangalore City and Poona and Bangalore City and Guntakal on the metre gauge throughout the year. In addition there were 45 refreshment rooms (European style). Besides these, there were 43 Indian refreshment rooms, of which 7 were exclusively for Mahommadans, 1 for Christians and the rest for the travelling public generally.

His Exalted Highness the Nizam's State Railway.—An Indian buffet car and third class carriage (bogie) with arrangements for the supply of meals and refreshments to Hindu and Mahommadan passengers ran daily between Bezwada and Kazipet by the Grand Trunk Express trains and another of a similar type between Bezwada and Wadi on alternate days. There were 13 Indian and 15 European refreshment rooms; one refreshment room was opened at Sailu and the tea room at Dornakal converted into a refreshment room.

North Western Railway.—For want of patronage European dining cars were removed from the Karachi Mails during the summer but suitable catering arrangements were made at Khanewal and Khanpur. The service, however, was reintroduced on these trains from 1st October 1932. Dining cars for Hindus and Mahommadans continued to run on the express trains between Lahore and Delhi. Vending cars were run on two passenger trains and two mail trains between Lahore and Rohri and were well patronised by the passengers. Two more vending cars were also under construction to facilitate the extension of this service to and from Karachi City. A total of 98 refreshment rooms were in service. One refreshment room for Hindus was opened at Hyderabad and the existing one was converted into a joint refreshment room for Europeans and Mahommadans.

South Indian Railway.—A restaurant car for upper class passengers was run on the Blue Mountain Express between Mettupalaiyam and Erode

from the 15th March 1933. Out of the 35 European refreshment rooms one at Hillgrove was closed on 1st September 1932. One Indian light refreshment room was opened at Manamadurai thus bringing the total from 29 to 30. Six Mahommadan refreshment rooms, the same as in the previous year, were also in service.

(v) *Vendors' Stalls.*

Assam Bengal Railway.—56 stations are provided with stalls. At important stations vendors also cater for substantial meals to passengers. Tea stalls were improved and standardised and their efficient maintenance was closely supervised by the Railway and the Indian Tea Cess Committee staff.

Bengal and North-Western Railway.—Including two new stalls—one for Hindus and one for Mahommadans—opened during the year, there were 57 vendors' stalls distributed over 37 stations. In addition 67 new pattern vending trays were issued to vendors for exhibiting eatables for sale on station platforms.

Bengal Nagpur Railway.—In addition to the pucca stalls which were in use during the previous year, condemned carriage bodies were suitably altered to provide tea stalls and one each was provided at 24 stations. Fly proof wire gauze for the sweetmeat stalls at Raipur and a water tap in the refreshment stall at Berhampore were also provided.

Bombay, Baroda and Central India Railway.—There were stalls at 53 stations on the broad gauge and 31 stations on the metre gauge. The two stalls at Bulsar were improved by the provision of good drainage. Private tea and refreshment stalls were allowed to be opened in the goods yard at Dadar and on the platform at Santa Cruz. An ice depôt was provided at Rewari.

Eastern Bengal Railway.—The number of vendors' stalls was increased from 105 to 106. The stalls are of an approved pattern and were fitted with marble topped counters and glass cases were also provided by the vendors. On the whole 76 stations were provided with stalls.

East Indian Railway.—One sweetmeat, one betel and one Hindu tea stall were provided at Sakrigalighat and one Mahommadan tea stall each was opened at Shahganj, Sultanpur and Benares Cantonment.

Great Indian Peninsula Railway.—During the year there were stalls at 123 stations.

Jodhpur Railway.—No change was made in the number of vendors' stalls open during the previous year, but additional vendors were provided at certain stations.

Madras and Southern Mahratta Railway.—Including the new stalls opened at Suldhal, Pachhapur and Shedbal during the year, there were stalls at 122 stations.

North Western Railway.—Addition to the number of stalls was made at 16 stations. New stalls were also opened at Begamabad, Mansurpur and Daraula. Moreover the stalls at Sibi, Mach, Kolpur and Quetta were improved to standard type.

South Indian Railway.—New tea stalls at 3 stations, fruit stalls at 4 stations and a light refreshment stall at Pollachi, were provided during the year. During the festival period light refreshment stalls were run by licencees and the Railway Company at Conjeevaram (Hindus), Nagore (Mahommadans) and Kumbakonam.

(vi) *Waiting rooms for upper class passengers, waiting halls for third class passengers—Benches.*

Assam Bengal Railway.—New waiting rooms for first and second class passengers were built at Noakhali. The waiting halls at Kanchannagar and

Gomdandi were extended and new waiting halls were provided at Bandua-Daulatpur, Chitholia, Peerbakshahat, Sarkarhat, Katirhar and Oating.

Two benches each were provided in the waiting halls at Kunderhat, Dhalghat and Kanchannagar, three at Gomdandi and one at Fouzdarhat.

Bengal and North-Western Railway.—A new third class station office with waiting hall was built at Gaur in place of the old small flag station.

Two double seated benches each were provided at the platforms at Darbhanga and Hajipur respectively.

Bengal Nagpur Railway.—The waiting hall at Jhalda was improved.

Bombay, Baroda and Central India Railway.—The waiting room at Petlad was improved. A waiting hall for third class passengers was provided at Vasan. As in the previous years the policy of providing benches along with new waiting sheds or extensions to the existing ones, was continued during the year. Out of the eleven benches released from the stations closed and from stations which could conveniently spare, one was placed on the platform at Ahmedabad, four at Umreth and two at Bhalej, the remaining four being installed in the waiting halls at Umreth two, Nawapur one and Dondaiche one.

Eastern Bengal Railway.—One intermediate and third class waiting room for ladies was constructed at Barpeta Road.

East Indian Railway.—One intermediate class waiting room for ladies was built at Benares Cantonment. The waiting halls for third class passengers at Nimtita and Benares Cantonment were extended and new halls were built at Tundla, Jaswantnagar, Firozabad, Shikohabad, Gushkara and Tehta, the last two being for Zenana (Purdha ladies).

One additional bench each was provided on the platforms at Madhupur and Simultala. One bench was added to those in the third class waiting halls at Parasnath, Jasidih, Giridih, Hardwar, Dehra Dun and Moradabad respectively.

Great Indian Peninsula Railway.—A first and second class waiting room for ladies was opened at Damoh. The waiting hall at Manikpur was provided with more accommodation by the removal of the tea and food stall situated in the middle of the hall. A waiting hall was built at Mana.

Twelve additional benches were provided on the platform at Jhansi and two in the waiting hall at Mana.

Jodhpur Railway.—New waiting halls were built at Patoyun, Khan (Sindh) and Noabad.

Madras and Southern Mahratta Railway.—The verandahs in the rear of the third class waiting halls at Budhgaon, Bhilawadi, Karad and Kudchi were extended to afford protection against wind and rain.

His Exalted Highness the Nizam's State Railway.—The existing waiting halls for third class passengers at Mudkhed, Nander, Kazipet and Kameredi were extended and those at Talmadla and Kazipet were improved.

Two additional benches were provided at Secunderabad and one at Hyderabad broad gauge stations.

North Western Railway.—One first and second class waiting room for ladies at Pathankot and one for ladies and another for gentlemen at Guler were provided during the year. A new waiting hall for third class passengers at Walton Training School station and another at Dadu were built. A shelter was also provided at Karachi Cantonment station platform.

Six additional benches at Sialkot and Batala and two at Kangra Mandir and Baijnath respectively were placed on station platforms.

Rohilkund and Kumaon Railway.—Four double wooden benches for the platforms at Pilibhit, Mailani and Lalkua, two ordinary benches at Bareilly city and one at Carewganj station were provided during the year.

South Indian Railway.—Two carriage bodies were provided at Takkolam to serve as waiting halls and temporary waiting halls, latrines, etc.,

were provided at Kumbakonam and at seventeen other stations on festival occasions.

Eight benches on the platform and four in the third class waiting hall at Madras Beach, one in the Varkalpattu third class waiting hall, two on the Vriddhachalam station platform, seven in Trichy Town third class waiting hall, one on Murukkampuzha platform, one on Salem Town platform and five in Salem town third class waiting hall were provided, during the year.

(vii) *Opening of new stations and city booking offices.*

Assam Bengal Railway.—One new station was opened for public traffic at Daldali. A booking office was also opened at Nazirhat goods shed for the booking of third class passengers, luggage and parcels.

Bengal Nagpur Railway.—New Stations were opened for public passenger traffic at Sadashibpur, Hindol Road on 6th April 1932, and at Komakhan on the 25th March 1933.

Bombay, Baroda and Central India Railway.—Two new flag stations were opened at Sirran and Makhupura. The flag station at Vasan was converted into a regular booking station and a pucca booking office was provided.

Burma Railways.—A new station was opened at Nyaunggan during January 1933 for passenger traffic.

Eastern Bengal Railway.—A new station was opened at Ganeshpur as an experimental measure for passenger booking only. A branch booking office for the issue of upper class and servants tickets only (excluding luggage and parcels) to stations on the home line and connected steamer services as well as foreign railways, was opened at the offices of Messrs. Thomas Cook and Sons, 4, Dalhousie Square, Calcutta.

East Indian Railway.—With a view to augment the conveniences of the travelling public, halting stations for branch line trains were provided at the following places :—

	Number of halting places.
1. Bhagalpur-Mandar Hill branch	5
2. Balamau-Auhadpur section	5
3. Allahabad-Rae Barelly Cawnpore section	3
4. Lucknow-Sultanpur-Zafarabad section	1
5. Barwadih section	1

Great Indian Peninsula Railway.—Sixteen stations which were temporarily closed were re-opened for traffic. Sakra, Digras, Mahur Road and Pusad stations, formerly open for through booking of goods and local booking of passengers, luggage, parcels, etc., were opened for through booking of coaching traffic from 1st January 1933.

Reay Market City Booking Office, Poona City, was opened on and from 15th October 1932 for local booking of outward parcels weighing not more than five maunds each.

Madras and Southern Mahratta Railway.—Two flag stations were opened at Pedda Ayutapalli and Penumarw in August and September 1932 respectively.

His Exalted Highness the Nizam's State Railway.—Peddapotlapadu and Dongupura passenger halts were opened as an experimental measure.

North Western Railway.—Kangra Mandir, Baijnath Mandir and Ahju were opened at first for local and later to through booking of passengers. Khojewala and Balinna Doaba were opened for all descriptions of coaching traffic and for local goods traffic up to 81 maunds per day except live stock, horses, carriages and motor cars, etc. Moga Hospital City Booking Office was re-opened temporarily for booking of intermediate and third class passengers.

South Indian Railway.—Kambarasampettai on the broad gauge and Kachanevilai on the metre gauge were opened during the year. A carting

agency for the conveyance of passengers, luggage and parcels between Pudukottai station and Pudukottai town was opened from February 1933.

90. Accidents.—(*a*) The following table shows the number of persons killed and injured in accidents on Indian Railways, apart from accidents in railway workshops, in 1931-32 and 1932-33 :—

Cause.	Killed.		Injured.	
	1931-32.	1932-33.	1931-32.	1932-33.
A.—Passengers.				
In accidents to trains, rolling-stock, permanent-way, etc.	8	6	93	61
In accidents caused by movements of trains and railway vehicles exclusive of train accidents.	245	215	808	761
In accidents on railway premises in which the movement of trains, vehicles, etc., was not concerned.	2	10	11	21
Total .	255	231	912	843
B.—Railway Servants.				
In accidents to trains, rolling-stock, permanent-way, etc.	16	8	157	79
In accidents caused by movements of trains and railway vehicles exclusive of train accidents.	201	184	1,819	1,789
In accidents on railway premises in which the movement of trains, vehicles, etc., was not concerned.	43	24	5,467	5,922
Total .	260	216	7,443	7,790
C.—Other than passengers and railway servants.				
In accidents to trains, rolling-stock, permanent-way, etc.	32	41	62	103
In accidents caused by movements of trains and railway vehicles exclusive of train accidents.	2,322	2,225	736	698
In accidents on railway premises in which the movements of trains, vehicles, etc., was not concerned.	19	44	47	75
Total .	2,373	2,310	845	876
Grand Total .	2,888	2,757	9,200	9,509

(*b*) Of the 2,757 persons killed, 1,744 were trespassers; 401 were reported to be suicides and 78 were killed on railway premises otherwise than during the movement of trains, vehicles, etc. The total number of persons killed in 1932-33 was 131 less than in the previous year. The number of passengers killed decreased by 24 and of passengers injured by 69.

(*c*) The following statement shows the number of passengers killed and injured on all railways during each of the last 5 years :—

Year.	Passengers. Killed.	Passengers. Injured.
1928-29	418	1,368
1929-30	358	1,126
1930-31	337	1,037
1931-32	255	912
1932-33	**231**	**843**

(*d*) On Class I Railways the number of railway servants killed in accidents which occurred during the movement of trains and railway vehicles, exclusive of train accidents, decreased by 12 and the number injured by 8. The following table analyses the main causes of these accidents :—

Cause.	Killed.		Injured.	
	1931-32.	1932-33.	1931-32.	1932-33.
Misadventure or accidental	107	**121**	1,567	**1,558**
Want of caution or misconduct on the part of the injured person.	75	**51**	164	**123**
Want of caution or breach of rules, etc., on the part of servants other than the person injured.	12	**9**	29	**13**
Defective apparatus or system of working, dangerous places, dangerous condition of work or want of rules or systems of working.	..	**1**	5	**3**
Total	194	**182**	1,765	**1,757**

(*e*) The following statement analyses the accidents which occurred during the last two years, grouped under the principal causes. A statement showing the accidents in greater detail for each railway will be found in Appendix D of Volume II of this report :—

	1931-32.	1932-33.
1. Running over cattle	8,790	9,237
2. Derailments not involving passenger trains	3,291	2,968
3. Accidents due to failure of couplings and draw gear	3,575	2,017

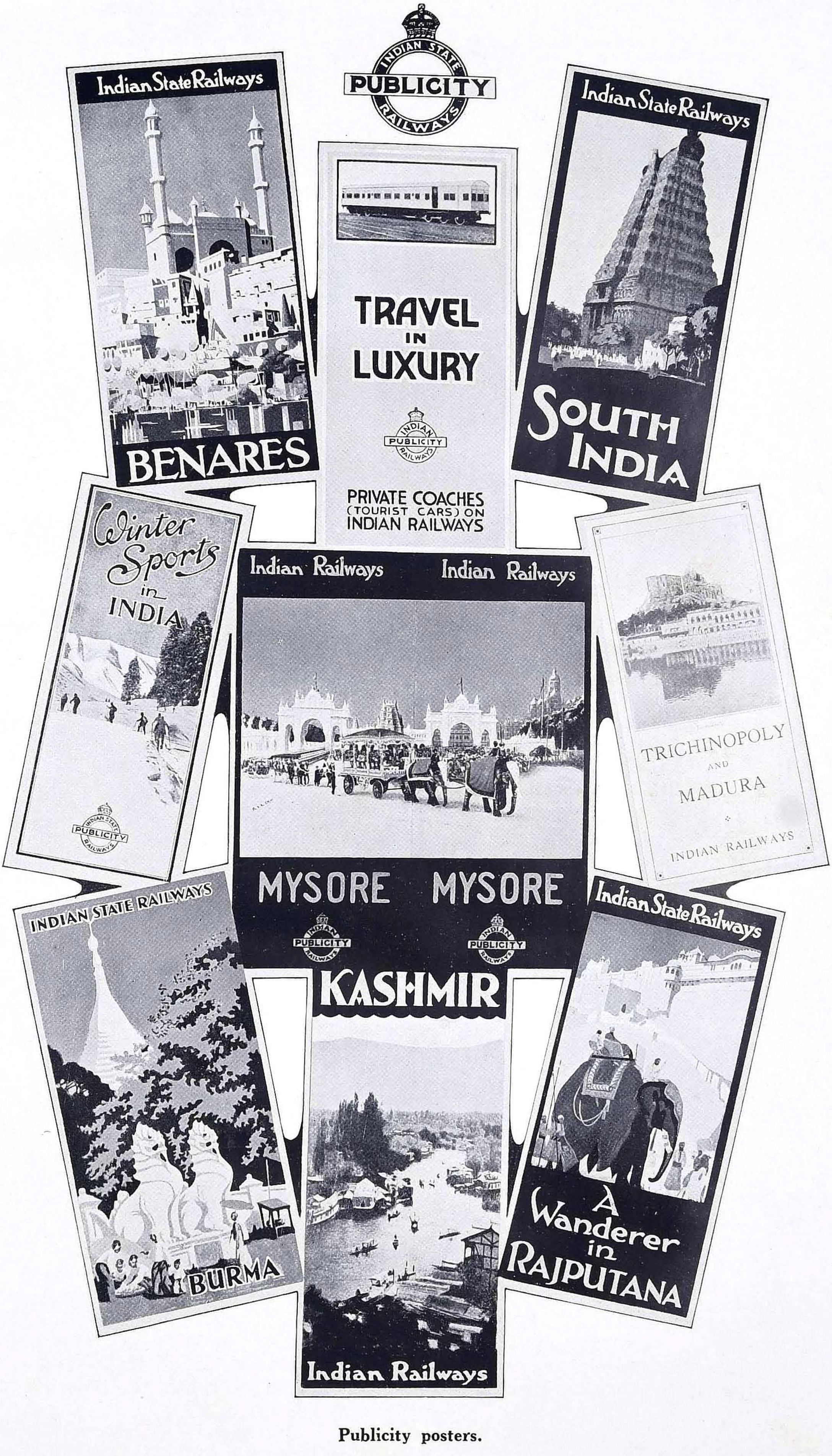
	1931-32.	1932-33.
4. Accidents due to failure of engines owing to faulty material, workmanship and operation arising from the working of the running staff	1,825	1,417
5. Accidents due to failure of engines owing to faulty material and workmanship in the Mechanical Department . .	577	543
6. Broken rails	306	350
7. Running over obstructions on the line other than those at level crossings .	168	236
8. Derailment of passenger trains	294	216
9. Fires in trains or at stations or bridges .	166	195
10. Attempted train wrecking	122	131
11. Collision involving goods trains or goods vehicles	165	127
12. Flooding of permanent way	136	124
13. Trains running over obstructions or vehicles at level crossings . . .	107	109
14. Land slips	69	59
15. Passenger trains running in the wrong direction through points but not derailed	68	59
16. Accidents due to failure of axles . . .	86	54
17. Train wrecking	32	47
18. Collisions involving passenger trains .	65	44
19. Collisions between light engines . .	35	34
20. Accidents due to failure of tyres or wheels .	17	11
21. Accidents due to failure of brake apparatus	14	5
22. Accidents due to failure of other rolling stock	...	4
23. Failure of bridges or tunnels	7	3
24. Miscellaneous	404	297
Total .	20,319	18,287

There was a decrease of 2,032 in the total number of accidents as compared with the previous year. " Running over cattle " still accounts for the largest number of accidents, *i.e.*, 51 per cent. of the whole. Next in order are " derailments not involving passenger trains " 16 per cent., " accidents due to failure of couplings and draw gear " 11 per cent., " accidents due to failure of engines owing to faulty working of the running staff, etc." 8 per cent., " accidents due to failure of engines owing to faulty material, etc., in the mechanical department " 3 per cent., and " broken rails " 2 per cent.

With the exception of accidents under the heads " Running over cattle ", " broken rails ", " running over obstructions on the line other than those at level crossings ", " fires in trains or at stations or bridges ", " attempted train wrecking ", " trains running over obstructions or vehicles at level crossings ", " accidents due to failure of other rolling stock " and " train wrecking " all other heads show a decrease compared with the previous year. The number of accidents classed under " attempted train wrecking " and " train wrecking " increased from 122 and 32 to 131 and 47 respectively.

91. Brief details are given below of the more serious accidents which occurred during the year 1932-33.

On 5th April 1932, No. 292 Down ran over a bullock cart at mile 32/15/16 between Dalowali and Ranbirsinghpura on the North Western Railway. The accident was due to the rashness of the cart driver, Maula Dad, in attempting to cross the line when the train was very close to the level crossing. The driver of the cart and both the bullocks were killed, and the cart was completely smashed.



Publicity posters.

On 17th April 1932, a down light engine ran into a motor car at a level crossing gate at mile 13 between Monirampore and Begumpur on the East Indian Railway. As a result, 3 persons were killed and 3 received injuries, one of whom died later.

On 24th April 1932, No. 566 Up Goods train ran into a bullock cart at a level crossing at mile 92/16/17 between Padali and Ghoti on the Great Indian Peninsula Railway. The gates, which were closed, were forcibly opened, thus leading to the accident. One cartman and two bullocks were killed, the other cartman was seriously injured and the cart was shattered.

On 13th May 1932, No. 32 Down Mixed train was derailed at mile 78/8/9 between Dodjala and Devanhalli on the Mysore Railways. The cause of the accident is believed to be the failure of the running gear of the leading wheels of a goods wagon on the train. The damage to rolling stock, etc., amounted to Rs. 18,000.

On 22nd July 1932, No. 4 Down Frontier Mail ran into a motor lorry at a level crossing at mile 601/2 between Nowshera Thana and Pir Piai on the North Western Railway. The accident was due to one of the gates of the crossing being open, having either been forced by the lorry or left open by the gateman. Of the passengers in the lorry, 3 were killed instantaneously and 6 were seriously injured, of whom 2 died later.

On 1st November 1932, the s.s. "Tuscania" Boat Special ran into a trolly near Lakheri on the Bombay, Baroda and Central India Railway. The Sub-Permanent Way Inspector in charge of the trolly was killed. He was himself responsible for the accident in not taking measures to safeguard the running of his trolly though aware that the Down Special was expected to pass that locality at any moment.

On 4th November 1932, No. 4 Down Assam Mail ran into a bullock cart at mile 239/3 between Badargunj and Kholahati on the Eastern Bengal Railway. The accident was due to the gateman being absent from his gate, leaving the gate chains unsecured. The cartman died and the other occupant of the cart was seriously injured and later succumbed to his injuries in hospital.

On 11th December 1932, No. 346 Down Goods train was derailed at Htein-in on the Burma Railways. The derailment was due to the breakage of the tender draw-bar, which caused the engine to accelerate rapidly, thereby breaking the vacuum pipe connection between the tender and the four leading vacuum vehicles of the train.

One cattle attendant was killed and two injured, and five bulls were killed. The damage to rolling stock, etc., amounted to Rs. 25,000.

On 8th January 1933, No. 30 Down Assam Mail ran into a bullock cart at a "C" Class level crossing at mile 470/8/9 at Titabar on the Assam Bengal Railway. The cart was smashed and out of 3 occupants of the cart, one died and 2 were seriously injured.

On 10th January 1933, No. 184 Passenger train ran into a bullock cart at mile 199/18/19 between Lalgudi and Bikshandarkoil on the South Indian Railway. It resulted in serious injury to 3 men in the cart, one of whom died subsequently.

On 31st January 1933, No. 51 Up Mixed train ran into a bullock cart outside the Up outer signal of Sitapurhat station on the Howrah-Amta Light Railway. The accident was due to the negligence of the cartman, who was killed on the spot. One bullock was also injured and subsequently died.

92. Central Publicity.—The year 1932-33 has necessitated a greater concentrated and co-ordinated effort in order to maintain tourist traffic from abroad than any previous year on record. The same economic factor which had such a determining effect on tourist traffic to this country from America in 1931-32, namely, the general financial depression, was even more pronounced, having been aggravated by monetary disturbances and the Presidential election, the latter coinciding with the commencement of the tourist season.

These various factors adversely affected world cruise tourists. The number of world cruise ships that visited India during the year under review was slightly less than originally anticipated and some important cruises were cancelled at the last minute.

The "luxury" tourist traffic, on which the movement of tourist cars much depends, was also affected and was less than last year.

However, in spite of these adverse factors, the number of independent enquiries from persons contemplating travel to India appreciably increased with the result that the total figures of enquiries for the period under review mark an improvement over those of last year. Sufficient information is not, however, available to enable a conclusion to be arrived at as to the extent to which these enquiries led to actual travel in India.

Speaking of overseas tourist traffic generally, it is hoped that "luxury" travel will return again as soon as conditions improve, and, with an increase in individual cheap tours also, there are in America and the Continent considerable possibilities of increasing the number of tourists to India.

A new departure this year has been that of advertising India on the Continent. By this is meant advertising in newspapers and periodicals as apart from the display of posters and distribution of travel pamphlets. Although only a very small amount was spent in this manner in France and Germany, enquiries resulting therefrom exceeded expectations and it is proposed to continue this form of propaganda in the coming year.

Another encouraging feature during 1932-33 in regard to the prospects of new tourist traffic from abroad, particularly America, is the growing interest being displayed by important tourist agents and shipping companies in the development of large conducted tours. The Central Publicity Bureau and its New York and London Offices are in co-operation with the promoting companies, and it should be only a question of time before such tours become recognised by the general public.

Both the New York and the London Bureaux have recorded a considerably larger number of enquiries from the public during the period under review, and in consequence, an increased number of itineraries have been supplied. Window displays of both offices continued to receive special attention during the year, while lectures, broadcasting, special stalls at industrial and trade exhibitions, the supply of photographs to leading magazines, and carefully planned advertising and free press campaigns in the leading American, Continental and English presses were important features of the activities of both Bureaux during 1932-33.

Apart from the general activities of the Central Publicity Bureau during 1932-33, new experiments were undertaken to foster third class traffic, especially pilgrim traffic to *melas* and other religious festivals, as the result of co-operation between the railways concerned and certain religious bodies. This, it is hoped, will prove of considerable benefit to the railways.

It should, however, be borne in mind that, although the development of third class traffic in India itself is of the utmost value to railways, the earnings involved represent a turnover of the money in the country; whereas the revenue derived from overseas tourist traffic represents new money brought into the country and is a contributory factor to the balance of trade.

The expenditure on the Publicity Bureau including the London and New York Bureaux during the last 3 years is given below :—

	1930-31.	1931-32.	1932-33.
	Rs.	Rs.	Rs.
India	6,75,362	3,49,452	2,26,507
London	1,21,192	1,02,083	79,039
New York	2,34,051	1,88,100	2,08,660
Total	10,30,605	6,39,635	5,14,206

93. Anti-malarial measures.—During the year under review anti-malarial measures on railways were continued with good results though in the case of the Eastern Bengal Railway the number of malaria cases among the railway staff unfortunately increased from 8,040 in 1931-32 to 12,596 in 1932-33. The problem is, however, being tackled seriously on that railway and satisfactory progress is expected in the current year. Besides entering into an agreement with the Anti-Malarial Association, formed under the auspices of the Indian Tea Cess Association for the prevention of malaria, the administration is also co-operating with the Barrackpore Anti-Malarial Association and the Dacca Municipal authorities for the prevention of mosquito breeding in railway land at Barrackpore and Dacca.

On the Assam Bengal Railway, although malaria was prevalent to an alarming extent at Pahartali, the number of malaria cases at Lumding during the year under review has been the lowest on record, due to the anti-malarial campaign which has now been conducted there for several years. The railway administration is taking active steps at Pahartali to combat the disease and from the reports that have been received at the time of writing this report, it appears that these have been meeting with a measure of success.

Throughout the year under review the Great Indian Peninsula Railway continued the usual anti-malarial measures on the line with a view to the systematic destruction of larvæ and prevention of breeding and the percentage of malaria cases in relation to the total number of staff have decreased from 7·98 in 1930-31 and 8·22 in 1931-32 to 7·81 in 1932-33.

The Madras and Southern Mahratta Railway report that, during the year, anti-malarial measures have been further successful and 6 stations previously classified as definitely unhealthy have been declared normal.

Anti-malarial activities were also continued at various places on the broad and metre gauge sections of the Bombay, Baroda and Central India Railway.

The Bengal Nagpur Railway report a further improvement in the incidence of malaria. The number of malaria cases on this railway decreased from 2,127 in 1931 to 1,615 in 1932 resulting in a saving of 1,181 sick-men-days. Owing to financial stringency, however, malarial controls remained closed at 3 stations on this railway during the year 1932.

APPENDIX A.

Railway Administrations in India alphabetically arranged in three classes according to their gross earnings showing the working agencies and ownership.

[NOTE.—Railways under construction or sanctioned for construction on the 31st March 1933, are shown in italics.]

RAILWAY SYSTEM.		LINES COMPRISED IN THE SYSTEM.		
Name. 1	Worked by 2	Name. 3	Gauge. 4	Owned by 5
		CLASS I.—RAILWAYS.		
1. Assam Bengal . .	Assam Bengal Railway Company.	(a) Assam Bengal .	3′ 3⅜″	State.
		(b) Chaparmukh Silghat	3′ 3⅜″	Branch line Company under guarantee terms.
		(c) Katakhal Lalabazar .	3′ 3⅜″	Ditto.
		(d) Mymensingh Bhairab Bazar.	3′ 3⅜″	Branch line Company under guarantee and rebate terms.
2. Bengal and North-Western.	Bengal and North-Western Railway Company.	(a) Bengal and North-Western.	3′ 3⅜″	Company subsidized by the Government of India*.
		(b) Mashrak-Thawe .	3′ 3⅜″	State.
		(c) Tirhoot . . .	3′ 3⅜″	Do.
3. Bengal Nagpur . .	Bengal Nagpur Railway Company.	(a) Bengal Nagpur .	5′ 6″	Do.
		(b) Anuppur-Manendragarh.	5′ 6″	Do.
		(c) Mayurbhanj . .	2′ 6″	Branch line Company under rebate terms.
		(d) Parlakimedi Light .	2′ 6″	Indian State.
		(e) Purulia-Ranchi .	2′ 6″	State.
		(f) Raipur-Dhamtari .	2′ 6″	Do.
		(g) Satpura . . .	2′ 6″	Do.
4. Bombay, Baroda and Central India.	Bombay, Baroda and Central India Railway Company.	(a) Bombay, Baroda and Central India.	5′ 6″	Do.
		(b) Nagda-Ujjain . .	5′ 6″	Indian State.
		(c) Petlad-Cambay (Anand-Tarapur Section).	5′ 6″	Ditto.
		(d) Petlad-Cambay (Tarapur-Cambay Section).	5′ 6″	Ditto.
		(e) Tapti-Valley . .	5′ 6″	Branch line Company under rebate terms.
		(f) Bombay, Baroda and Central India.	3′ 3⅜″	State.
		(g) Ahmedabad-Parantij	3′ 3⅜″	Branch line Company under rebate terms.
		(h) Dhrangadra . .	3′ 3⅜″	Indian State.
		(i) Gaekwar's Mehsana .	3′ 3⅜″	Ditto.
		(j) Jaipur State . .	3′ 3⅜″	Ditto.
		(k) Palanpur-Deesa .	3′ 3⅜″	Ditto.†
		(l) Bombay, Baroda and Central India.	2′ 6″	State.
		(m) Champaner-Shivrajpur-Pani Light.	2′ 6″	Branch line Company under rebate terms.
		(n) Godhra-Lunavada .	2′ 6″	Ditto.
		(o) Nadiad-Kapadvanj .	2′ 6″	Ditto.
		(p) Piplod-Devgad-Baria	2′ 6″	Indian State.
		(q) Rajpipla State .	2′ 6″	Ditto.
5. Burma . . .	State . . .	(a) Burma . . .	3′ 3⅜″	State.

* Receives land only from Government.

† Owned jointly by Government and Palanpur Durbar. (Sale of Government's Financial interest in this line to the Durbar has been decided upon).

Railway system.		Lines comprised in the system.		
Name.	Worked by	Name.	Gauge.	Owned by
1	2	3	4	5
		CLASS I.—RAILWAYS—*contd.*		
6. Eastern Bengal	State	(*a*) Eastern Bengal	5′ 6″	State.
		(*b*) Sara Sirajganj	5′ 6″	Branch line Company under rebate terms.
		(*c*) Eastern Bengal	3′ 3⅜″	State.
		(*d*) Cooch Behar State	3′ 3⅜″	Indian State.
		(*e*) Eastern Bengal	2′ 6″	State.
		(*f*) Khulna-Bagerhat	2′ 6″	Branch line Company under rebate terms.
7. East Indian	State	(*a*) East Indian	5′ 6″	State.
		(*b*) Hardwar-Dehra	5′ 6″	Branch line Company under guarantee terms.
		(*c*) South Bihar	5′ 6″	Branch line Company.
		(*d*) Cawnpore-Burhwal link.*	3′ 3⅜″	State.
8. Great Indian Peninsula.	State	(*a*) Great Indian Peninsula.	5′ 6″	Do.
		(*b*) Bhopal-Itarsi (Indian State Section).	5′ 6″	Indian State.
		(*c*) Bhopal-Ujjain	5′ 6″	Ditto.
		(*d*) Bina-Goona-Baran	5′ 6″	Ditto.
		(*e*) Dharwa-Pusad	2′ 6″	State.
		(*f*) Dhond-Baramati	2′ 6″	Branch line Company under rebate terms.
		(*g*) Ellichpur-Yeotmal	2′ 6″	Ditto.
		(*h*) Pachora-Jamner	2′ 6″	Ditto.
		(*i*) Pulgaon-Arvi	2′ 6″	Ditto.
9. Jodhpur	Indian State	(*a*) Jodhpur	3′ 3⅜″	Indian State.
		(*b*) Jodhpur-Hyderabad (British Section).	3′ 3⅜″	State.
		(*c*) Mirpur Khas-Khadro	3′ 3⅜″	Company subsidized by the Government of India.†
10. Madras and Southern Mahratta.	Madras and Southern Mahratta Railway Company.	(*a*) Madras and Southern Mahratta.	5′ 6″	State.
		(*b*) Kolar Goldfields	5′ 6″	Indian State.
		(*c*) Tenali-Repalle	5′ 6″	District Board.
		(*d*) Madras and Southern Mahratta.	3′ 3⅜″	State.
		(*e*) Alnavar-Dandeli (Provincial).	3′ 3⅜″	Do.
		(*f*) Bangalore-Harihar	3′ 3⅜″	Indian State.
		(*g*) Bezwada-Masulipatam.	3′ 3⅜″	District Board.
		(*h*) Hindupur (Yesvantpur-Mysore Frontier).	3′ 3⅜″	Indian State.
		(*i*) Kolhapur State	3′ 3⅜″	Ditto.
		(*j*) Sangli State	3′ 3⅜″	Ditto.
		(*k*) West of India Portuguese.	3′ 3⅜″	Foreign Country.
11. Nizam's State	Nizam's State Railways.	(*a*) Nizam's State	5′ 6″	Indian State.
		(*b*) Bezwada Extension	5′ 6″	State.
		(*c*) Nizam's State	3′ 3⅜″	Indian State.
		(*d*) Dronachellam (Dhone)-Kurnool-British Frontier.	3′ 3⅜″	State.

* Under running power agreement the B. and N.-W. Railway Company run and haul their trains and traffic over this line.

† Receives land only from Government.

Railway system.		Lines comprised in the system.		
Name. 1	Worked by 2	Name. 3	Gauge. 4	Owned by 5
		CLASS I.—RAILWAYS—*concld.*		
12. North Western	State	(a) North Western	5′ 6″	State.
		(b) Amritsar Patti	5′ 6″	Branch line Company under rebate terms.
		(c) Bahawalnagar Baghdad.	5′ 6″	Indian State.
		(d) Hoshiarpur Doab (Jullundur Mukerian).	5′ 6″	Branch line Company under rebate terms.
		(e) Hoshiarpur Doab (Phagwara-Rahon).	5′ 6″	Ditto.
		(f) Jammu and Kashmir (Indian State Section).	5′ 6″	Indian State.
		(g) Jind Panipat (Indian State Section).	5′ 6″	Ditto.
		(h) Khanpur-Chachran	5′ 6″	Ditto.
		(i) Ludhiana-Dhuri Jakhal.	5′ 6″	Ditto.
		(j) Mandra-Bhaun	5′ 6″	Branch line Company under rebate terms.
		(k) Rajpura Bhatinda	5′ 6″	Indian State.
		(l) Sirhind Rupar	5′ 6″	Ditto.
		(m) Sialkot Narowal	5′ 6″	Branch line Company under rebate terms.
		(n) Jacobabad-Kashmor	2′ 6″	Ditto.
		(o) Kalka-Simla	2′ 6″	State.
		(p) Kangra-Valley	2′ 6″	Do.
		(q) Kohat-Thal	2′ 6″	Do.
		(r) Larkana-Jacobabad	2′ 6″	Branch line Company under rebate terms.
		(s) Trans-Indus (Kalabagh-Bannu).	2′ 6″	State.
		(t) Zhob Valley (Fort Sandemankhanai).	2′ 6″	Do.
13. Rohilkhand and Kumaon.	Rohilkhand and Kumaon Railway Company.	(a) Rohilkhand and Kumaon.	3′ 3⅜″	Company subsidized by the Government of India.
		(b) Lucknow-Bareilly	3′ 3⅜″	State.
14. South Indian	South Indian Railway Company.	(a) South Indian	5′ 6″	Do.
		(b) South Indian	3′ 3⅜″	Do.
		(c) Nilgiri	3′ 3⅜″	Do.
		(d) Peralam-Karaikkal	3′ 3⅜″	Foreign Country.
		(e) Podanur-Pollachi	3′ 3⅜″	District Board.
		(f) Pondicherry	3′ 3⅜″	Foreign Country.
		(g) Shoranur-Cochin	3′ 3⅜″	Indian State.
		(h) Tinnevelly-Tiruchendur.	3′ 3⅜″	District Board.
		(i) Travancore (British Section.)	3′ 3⅜″	State.
		(j) Travancore (Indian State Section).	3′ 3⅜″	Indian State.
		(k) Morappur-Hosur	2′ 6″	State.
		(l) Tirupattur-Krishnagiri.	2′ 6″	Do.
		CLASS II.—RAILWAYS.		
1. Barsi Light	Barsi Light Railway Company.	Barsi Light	2′ 6″	Company subsidized by the Government of India.*
2. Bengal Dooars	Bengal Dooars Railway Company.	(a) Bengal Dooars	3′ 3⅜″	Company subsidized by District Board.
		(b) Bengal Dooars Extensions.	3′ 3⅜″	Company subsidized by the Government of India.*
3. Bhavnagar State	Indian State	Bhavnagar State	3′ 3⅜″	Indian State.
4. Bikaner State	Ditto	Bikaner State	3′ 3⅜″	Ditto.

* Receives land only from Government.

Railway system.		Lines comprised in the system.		
Name.	Worked by	Name.	Gauge.	Owned by
1	2	3	4	5
CLASS II.—RAILWAYS—*concld.*				
5. Darjeeling Himalayan	Darjeeling Himalayan Railway Company.	(a) Darjeeling Himalayan.	2′ 0″	Company subsidized by Local Government.
		(b) Darjeeling Himalayan Extensions.	2′ 0″	Branch line Company under rebate terms.
6. Dibru-Sadiya . .	Assam Railways and Trading Company.	(a) Dibru-Sadiya . .	3′ 3⅜″	Company subsidized by Local Government.
		(b) Ledo and Tikak-Margherita Colliery.	3′ 3⅜″	Unassisted Company.
7. Gaekwar's Baroda State.	Indian State . .	(a) Gaekwar's Baroda State.	2′ 6″	Indian State.
		(b) Bodeli Chhota Udaipur.	2′ 6″	Ditto.
8. Gondal . .	Ditto . . .	(a) Gondal . . .	3′ 3⅜″	Ditto.
		(b) Jetalsar Rajkot .	3′ 3⅜″	Ditto.
		(c) Khijadiya Dhari .	3′ 3⅜″	Ditto.
9. Howrah-Amta Light .	Howrah-Amta Light Railway Company.	Howrah-Amta Light .	2′ 0″	Company subsidized by District Board.
10. Jamnagar and Dwarka	Jamnagar and Dwarka Railway Company.	(a) Jamnagar . .	3′ 3⅜″	Indian State.
		(b) Jamnagar-Dwarka .	3′ 3⅜″	Branch line Company under guarantee and rebate terms.†
		(c) Okhamandal . .	3′ 3⅜″	Indian State.
11. Junagad State . .	Indian State . .	Junagad State . .	3′ 3⅜″	Ditto.
12. Morvi . . .	Ditto . . .	Morvi	3′ 3⅜″	Ditto.
13. Mysore . . .	Ditto . . .	(a) Mysore . . .	3′ 3⅜″	Ditto.
		(b) Bangalore-Chik Ballapur Light.	2′ 6″	Company guaranteed by Indian State.
		(c) Kolar District .	2′ 6″	Indian State.
		(d) Tarikere-Narasimharajapura Light.	2′ 0″	Ditto.
14. Shahdara (Delhi) Saharanpur Light.	Shahdara (Delhi) Saharanpur Light Railway Company.	Shahdara (Delhi) Saharanpur Light.	2′ 6″	Company subsidized by the Government of India.*
CLASS III.—RAILWAYS.				
1. Ahmadpur-Katwa .	Ahmadpur-Katwa Railway Company.	Ahmadpur-Katwa .	2′ 6″	Branch line Company under guarantee terms.
2. Arrah-Sasaram Light	Arrah-Sasaram Light Railway Company.	Arrah-Sasaram Light .	2′ 6″	Company subsidized by District Board.
3. Bankura-Damoodar River.	Bankura-Damoodar River Railway Company.	Bankura-Damoodar River.	2′ 6″	Branch line Company under guarantee terms.
4. Baraset-Basirhat Light.	Baraset-Basirhat Railway Company.	Baraset-Basirhat Light .	2′ 6″	Company subsidized by District Board.
5. Bengal Provincial .	Bengal Provincial Railway Company.	(a) Bengal Provincial .	2′ 6″	Unassisted Company.
		(b) Dasghara Jamalpurgunj.	2′ 6″	Branch line Company under guarantee terms.
6. Bukhtiarpur-Bihar Light.	Bukhtiarpur-Bihar Light Railway Company.	Bukhtiarpur-Bihar Light	2′ 6″	Company subsidized by District Board.
7. Burdwan-Katwa .	Burdwan-Katwa Railway Company.	Burdwan-Katwa . .	2′ 6″	Branch line Company under guarantee terms.
8. Cutch State .	Indian State . .	Cutch State . . .	2′ 6″	Indian State.

† Financed on rebate terms given by the Jamnagar Durbar.
* Receives land only from Government.

Railway system.		Lines comprised in the system.		
Name. 1	Worked by 2	Name. 3	Gauge. 4	Owned by 5
CLASS III.—RAILWAYS—*concld.*				
9. Dehri-Rohtas Light .	Dehri-Rohtas Light Railway Company.	Dehri-Rohtas Light .	2′ 6″	Company subsidized by the Government of India.
10. Dholpur State . .	Indian State . .	Dholpur State . .	2′ 6″	Indian State.
11. Futwah-Islampur .	Futwah-Islampur Light Railway Company.	Futwah-Islampur . .	2′ 6″	Branch line Company under guarantee terms.
12. Gwalior Light . .	Indian State . .	Gwalior Light . .	2′ 0″	Indian State.
13. Howrah-Sheakhala Light.	Howrah-Sheakhala-Light Railway Company.	Howrah-Sheakhala Light	2′ 0″	Company subsidized by District Board.
14. Jagadhri Light .	Jagadhri Light Railway Company.	Jagadhri Light . .	2′ 0″	Unassisted Company.
15. Jessore-Jhenidah .	Jhenidah Railway Syndicate.	Jessore-Jhenidah . .	2′ 6″	Ditto.
16. Jorhat (Provincial) .	River Steam Navigation Company and India General Navigation and Railway Company.	Jorhat (Provincial) .	2′ 0″	State.
17. Kalighat-Falta .	Kalighat-Falta Railway Company.	Kalighat-Falta . .	2′ 6″	Branch line Company under guarantee terms.
18. Kulasekarapatnam Light.	East India Distilleries and Sugar Factories.	Kulasekarapatnam Light	2′ 0″	Unassisted Company.
19. Matheran Light .	Matheran Steam Tramway Company.	Matheran Light . .	2′ 0″	Company subsidized by the Government of India. *
20. Porbandar State .	Indian State . .	Porbandar State . .	3′ 3⅜″	Indian State.
21. Tezpore-Balipara Light.	Tezpore-Balipara Steam Tramway Company.	Tezpore-Balipara Light .	2′ 6″	Company subsidized by District Board.
22. *Tirupati-Tiruchanur Light.*	Tirupati-Tiruchanur Light Railway Company.	*Tirupati-Tiruchanur Light.*	2′ 0″	Unassisted Company.
23. Trivellore Light .	T. Namberumal Chetty and Sons.	Trivellore Light . .	2′ 0″	Ditto.
24. Udaipur-Chitorgarh .	Indian State . .	Udaipur-Chitorgarh .	3′ 3⅜″	Indian State.

* Receives land only from Government.

APPENDIX B.

Notes on the relation of the Government to Railways in India.

(Reprinted from the Report for 1914-15 and brought up to date.)

Diversity of Relations between the State and Railways.—One of the special features of the Indian Railway system is the diversity of conditions that prevails in the relation of the State to the various lines in respect of ownership and control. Of the important lines situated in British India or in which the Government of India is interested, five [the North Western,* Eastern Bengal, East Indian (with which has been amalgamated the Oudh and Rohilkhand Railway from the 1st July 1925), Great Indian Peninsula and Burma Railways] are owned and worked by the State; five (the Bombay, Baroda and Central India, Madras and Southern Mahratta, Assam-Bengal, Bengal-Nagpur and South Indian) are owned by the State but worked on its behalf by companies enjoying a guarantee of interest from the Government; two important lines (the Bengal and North-Western, and Rohilkhand and Kumaon) and many of less importance are the property of private companies, some being worked by the owning companies and some by the State or by the companies that work State-owned systems; several minor lines are the property of District Boards or enjoy a guarantee of interest granted by such Boards.

The diversity of conditions is in certain respects less important than might at first appear for the following reasons:—

The Government of India exercises under the Indian Railways Act, 1890, in respect of all railways in British India (and also, by virtue of arrangements with Indian States, in respect of certain railways passing through such States), certain general powers. Thus a railway may not be opened until a Government Inspector has certified that it has been constructed so as to comply with requirements laid down by the Government and can be used for the public carriage of passengers without danger to them. The Government of India can also, in the interest of the safety of passengers, require a railway to be closed, or the use of particular rolling-stock to be discontinued, or may prescribe conditions for the use of the railway or the rolling-stock. They can appoint a Railway Commission to investigate complaints on certain matters such as the withholding of reasonable traffic facilities or the grant of undue preference.

In addition, the Government of India (or in some cases Local Governments) exercise under the provisions of contracts detailed control over the management of all Railways in British India greatly exceeding that which is secured by the Indian Railways Act. They also have a certain financial interest in all companies in British India, and a preponderating interest in most of the Railways which are of the first importance.

History of Relations of the Government and Companies.—The main causes which have led to the present diversity of conditions in regard to the agency by which railways are managed, and the relations of the Government with the various classes of companies now in existence, are summarised in the following paragraphs:—

The first proposals for the construction of railways in India were submitted in 1844 to the East India Company in England by Mr. R. M. Stephenson, afterwards Chief Engineer of the East Indian Railway, and others; they included the construction of lines by railway companies to be incorporated for the purpose and the guarantee by the East India Company of a specified return. A contract for the construction by the East Indian Railway Company of an experimental line of 100 miles from Calcutta towards Mirzapore or Rajmehal at an estimated cost of 1,000,000*l*. was made in 1849, and a return of 5 per cent. was guaranteed by the East India Company on the Capital; and a similar contract was made in the same year with the Great Indian Peninsula Railway Company for a line from Bombay to Kalyan at an estimated cost of 500,000*l*. But the policy of entrusting generally the construction of Indian railways to guaranteed companies was not adopted until 1854 on the recommendation of Lord Dalhousie, who, in a minute, dated 20th April 1853, explained his reasons for preferring the agency of companies, under the supervision and control of the Government, to the construction of lines on behalf of the Government by its own officers. He held that the State Engineer officers would make railways as well, and possibly as cheaply, and as expeditiously as companies; but that the withdrawal from other duties of the large number

* Includes the Delhi Umballa Kalka and Southern Punjab Railways which were purchased by the Secretary of State on 31st March 1926 and 1st January 1930 respectively.

of officers required would be detrimental to the public interest, that the conduct of commercial undertakings did not fall within the proper functions of any Government and least of all within the functions of the Government of India, since the dependence of the population on the Government was, in India, one of the greatest drawbacks to the advance of the country, and that the country would therefore benefit by the introduction of English energy and English capital for railway purposes, with the possibility that such energy and capital would in due course be encouraged to assist in the development of India in other directions.

Old Guaranteed Railways.—The policy supported by Lord Dalhousie was adopted, between 1854 and 1860 contracts for the construction of Railways in India were made by the East India Company, or (after 1858) by the Secretary of State for India with the East Indian, Great Indian Peninsula, Madras, Bombay, Baroda and Central India, Sind (afterwards, the Sind, Punjab and Delhi), Eastern Bengal, Great Southern of India (afterwards, when amalgamated with the Carnatic Railway Company —see below—the South Indian) and Calcutta and South-Eastern Railway Companies. Under these contracts the railway companies undertook to construct and manage specified lines, while the East India Company (or the Secretary of State for India) agreed to provide land and guaranteed interest on the capital, the rate fixed being in various cases 5, $4\frac{3}{4}$ and $4\frac{1}{2}$ per cent. according to the market rates prevailing when the various contracts were made. Half of any surplus profits earned was to be used towards repaying to the Government any sums by which it had been called upon to supplement the net earnings of any previous period in order to make good the guarantee of interest; and the remainder was to belong to the shareholders. In practically all matters of importance except the choice of staff, the companies were placed by the contracts under the supervision and control of the Government which had power to decide on the standard and details of construction; the rolling-stock to be provided, the number, time and speed of trains; the rates and fares to be charged; the expenditure to be incurred; the standard of maintenance; and the form of accounts. The railways were to be held by the companies on leases terminating at the end of 99 years, and on such termination the fair value of their rolling-stock, plant and machinery was to be paid to them. But provision was also made to enable the Government to purchase the lines after 25 or 50 years on terms calculated to be the equivalent of the companies interest therein and also to enable the companies to surrender their lines to the Government and to receive in return their capital at par.

Early Attempts to Secure Funds for Railway Construction without a Guarantee.—An attempt to secure the construction of railways in India, on terms more favourable to the Government than those of the contracts with the original guaranteed companies, was first made in 1862, when a subsidy, but not a guarantee, was granted to the Indian Branch Railway Company which proposed to make feeders to the trunk lines in Northern India, and did actually make one such line. Similar assistance was granted later to the Indian Tramway Company, which made a short line in Madras. In 1864, the terms granted to the two companies mentioned were taken as a standard for general adoption with a view to the encouragement of similar companies. The chief provisions were that the Government, besides giving the necessary land free of costs, would grant an annual subsidy for 20 years at a rate not exceeding £100 per mile of line with an addition in respect of large bridges costing more than £10,000. These terms failed to attract capital, and the two unguaranteed companies which had begun work found themselves after a few years unable to proceed without further assistance from the Government. Consequently, in 1867, a contract was entered into with the Indian Branch Railway Company (which soon after changed its name to the "Oudh and Rohilkhand Railway Company") by which the company was guaranteed interest at 5 per cent. per annum on the cost of certain lines to be carried out by it, on conditions similar to those laid down in the contracts of the period 1854—1860. Similarly, the Indian Tramway Company, after having been given in 1868 a guarantee of 3 per cent. per annum, went into liquidation in 1870, and became absorbed in a new company called the Carnatic Railway Company (afterwards amalgamated with the Great Southern of India Railway Company to form the South Indian Railway Company), with which the Secretary of State entered into a contract guaranteeing interest on its capital at 5 per cent. per annum. In 1869, Sir John Lawrence summed up the result of the experiment of the construction of railways by unguaranteed companies as follows:—"The Government of India has for several years been striving to induce capitalists to undertake the construction of railways in India at their own risk, and on their responsibility with a minimum of Government interference. But the attempt has entirey failed, and it has become obvious that no capital can be obtained for such undertakings otherwise than under a guarantee of interest fully equal to that which the Government would have to pay if it borrowed directly on its own account."

The attempt to encourage unguaranteed companies having thus been unsuccessful, it became necessary to decide whether the old practice of relying on guaranteed companies, of the type that had provided capital for, and had constructed, the first railways

in India, should be continued. The Government of India expressed their objections to this course. They doubted whether their power of control over such companies secured the greatest possible economy in construction. They also disliked the arrangements under which they guaranteed the interest on the capital of companies, and thus became responsible for loss on working while having only a comparatively remote prospect of profiting by the result of sucessful working. Two important changes were consequently made in the practice that had been followed since the beginning of railway construction in India:—

1. Arrangements were made with some of the most important of the guaranteed companies that, in lieu of the provision that half of any surplus profits was to be applied in repayment of sums advanced by the Government under the guarantee of interest, half of the surplus profits for each half-year should be the property of the Government. In consideration of this modification, the Government relinquished, in the case of three companies, the Great Indian Peninsula, the Bombay, Baroda and Central India and the Madras, its right to purchase the lines at the end of the first 25 years from the dates of the respective contracts.
2. It was decided by the Secretary of State that the time had arrived when in both raising and expending such additional capital as might be required for new lines in India, the Government should secure to itself the full benefit of its own credit and of the cheaper methods which it was expected that it would be able to use. Accordingly, for several years after 1869, the capital expenditure on railways was chiefly incurred direct by the State and no fresh contracts with guaranteed companies were made except for small extensions. Among the lines constructed or begun by State agency and from State capital between 1869 and 1880 were the Indus Valley, Punjab Northern, Rajputana-Malwa, Northern Bengal, Rangoon and Irrawady Valley and Tirhoot.

Progress in the Construction of Railways.—By the end of 1879, in about 25 years from the introduction of railways in India, 6,128 miles of railway had been constructed by companies which had expended, approximately, £97,872,000 (these figures include the Calcutta and South-Eastern and Nalhati Railways which were constructed by companies but were purchased by the Government in 1868 and 1872, respectively). By the same date 2,175 miles of railway had been constructed by the Government at a cost of £23,695,226.

Introduction of Modified Guarantee Terms.—In 1880, the necessity for great and rapid extension of the railway system was urged by the Famine Commissioners, appointed after the great famine of 1878, who estimated that at least, 5,000 miles were still necessary for the protection of the country from famine. It was held by the Government of the time that a limit was necessary on the capital borrowed annually; and it was clear that the limit fixed was not high enough to allow of such progress in railway construction as was desirable. With reference to this difficulty the Famine Commissioner remarked: "that there would be manifest advantages in giving free scope to the extension of railways by private enterprise if it were possible; and, though the original form of guarantee has been condemned, it may not be impossible to find some substitute which shall be free from its defects, and may secure the investment of capital in these undertakings without involving the Government in financial or other liabilities of an objectionable nature."

Action in the direction suggested by the Commission was taken by the formation of three companies without a guarantee (the Bengal Central in 1881 and the Bengal and North-Western and Rohilkhand and Kumaon in 1882), and three new guaranteed companies (Southern Mahratta in 1882, the Indian Midland in 1885, and the Bengal-Nagpur in 1887). The Bengal and North-Western and the Rohilkund and Kumaon Railway Companies are referred to more fully, in a later paragraph. The Bengal Central Railway Company's operations were not successful at the outset, and a revised contract was entered into with the company, with effect from the 1st July 1885, under which the Secretary of State guaranteed interest at $3\frac{1}{2}$ per cent. on the company's capital the balance of net earnings remaining after payment of interest on advances by the Secretary of State and debenture capital (but not the share capital) being divided between the Secretary of State and the company in the proportions of three-quarters to the former and one-quarter to the latter. The new contract gave the Secretary of State the right to take possession of the line on the 30th June 1905, or subsequently at intervals of 10 years, on repaying the company's capital at par. The rate of interest guaranteed to the Southern Mahratta Railway Company was also $3\frac{1}{2}$ per cent.; in this case the balance of net earnings remaining after payment of interest on advances by the Secretary of State (but not on share or debenture capital) was divisible in the same way as in the case of the Bengal Central Railway Company. The guarantee to the Indian Midland and Bengal-Nagpur Railway Companies was 4 per cent.; and the Secretary of State was entitled to three-quarters of the surplus profits in excess of all interest charges. The lines constructed by the three companies last mentioned were declared to be the property

of the Secretary of State, who had the right to determine the contracts at the end of approximately 25 years after their respective dates, or at subsequent intervals of 10 years, on repaying at par the capital provided by the companies.

The Assam Bengal Railway Company was formed on similar lines in 1892, except that any surplus profits were to be divided between the Secretary of State and the company in proportion to the capial provided by each. The rate of guarantee in this case was $3\frac{1}{2}$ per cent. for the first six years and thereafter 3 per cent.

The terms of guarantee given to the companies formed since 1880 have thus been much more favourable to the Government than in the case of those formed before 1869.

Termination of Contracts of the Old Guaranteed Companies.—In dealing with the guaranteed companies formed before 1869 and with those formed in 1881 and subsequently, it has been the practice (except in the cases mentioned above, when the purchase of some of the old guaranteed lines was postponed in order to secure to the Government a share in surplus profits) to use in some way or other at the earliest possible date the right reserved by the Government of terminating the contracts of the various companies. The method of making use of this right has differed in different cases. The Eastern Bengal, the Oudh and Rohilkhand, the Sind-Punjab and Delhi and the Southern Punjab lines were purchased and transferred to State management, the last two now forming part of the North Western Railway. Similarly, the Bengal Central line was purchased and made part of the Eastern Bengal Railway. The Madras and the Indian Midland lines were acquired but left, after acquisition, under the management of companies working other lines with which it was advantageous to amalgamate them. In the cases of South Indian, Bombay, Baroda and Central India, Southern Mahratta, and Bengal Nagpur, the course adopted has been to arrange for the continuance of management by the original company (or by a new company closely related to the old one), but to secure more favourable financial conditions for the State by one or more of the following methods:—reduction of the amount of capital retained by the companies in the undertakings, reduction of the rate of interest guaranteed by the State on such capital and modification in favour of the Government of the clauses relating to the division of surplus profits. This method was adopted also in regard to the East Indian and the Great Indian Peninsula Railways, but the contracts under which they were being worked having terminated on the 31st December 1924 and the 30th June 1925 respectively, the management of these lines has been taken over by the State from those dates. Similarly the management of the Burma Railways was taken over by the State on the termination of the contract with the Burma Railways Company on the 31st December 1928.

Arrangements between the Government and Companies at present.—The relations between the Government and the guaranteed companies now working railways may be summarised as follows:—

The lines that they work are the property of the State.

The greater part of the capital is the property of the Government, either through having been originally supplied by it or through the acquisition by the Government of the greater part of the companies' interest on the termination of old contracts.

When funds are required for further capital expenditure, the Government has the option either of providing them or of calling on the company to provide them. Both the Government and the company usually receive interest at a fixed rate on their capital and surplus profits are divided between the Government and the company in the various proportions provided for by the contracts. The company's share is in most cases only a small proportion of the total amount.

All the contracts are terminable at the option of the Secretary of State, at specified dates; and on termination the company's capital is repayable at par.

The administrative control exercised by the Government over the companies is as follows:—

The company is bound to keep the line in good repair, in good working condition, and fully supplied with rolling-stock, plant, and machinery; to keep the rolling-stock in good repair and in good working condition; and to maintain a sufficient staff for the purposes of the line;—all to the satisfaction of the Secretary of State.

The Secretary of State may require the company to carry out any alteration or improvement in the line, or in the working that he may think necessary for the safety of the public or for the effectual working of the line.

The Secretary of State may require the company to enter into agreements, on reasonable terms and conditions, with the administrations of adjoining railways for the exercise of running powers, for the supply to one another of surplus rolling-stock, for the interchange of traffic and rolling-stock and

the settlement of through rates, and for additions and alterations to, or the redistribution of, existing accommodation in junctions or other stations in view to their convenient mutual use.

The train service is to be such as the Secretary of State may require. In order to secure a general control over the rates quoted by companies, the Secretary of State has retained power to settle the classification of goods and to authorise maximum and minimum rates within which the companies shall be entitled to charge the public for the conveyance of passengers and goods of each class.

The company has to keep such accounts as the Secretary of State may require, and these are subject to audit by the Secretary of State.

In all other matters relating to the line the company is made subject to the supervision and control of the Secretary of State, who may appoint such persons as he may think proper for the purpose of inspecting the line, auditing the accounts, or otherwise exercising the powers of supervision and control reserved to him. In particular, the Secretary of State has the right to appoint a Government Director to the Board of the company, with a power of veto on all proceedings of the Board. All the moneys received by the company in respect of the undertaking, whether on capital or revenue account, have to be paid over to the Secretary of State.

All expenditure by the company has to be stated and submitted for the sanction of the Secretary of State.

Thus, the Government has the preponderating financial interest in the lines worked by the two classes of guaranteed companies, those formed before 1869 and retained as working agencies with reduced capital after purchase, and those formed on terms more favourable to the State after 1880; it has exceedingly wide control over the methods of working; and it has the right of taking possession of the lines at specified times on repayment at par of the capital of the companies.

Other Lines worked by Companies.—In addition to the lines referred to above, and apart from lines constructed by Branch line companies, District Boards and Indian States, two lines of some importance have been constructed by companies which receive no direct assistance by the Government, namely, the Bengal and North-Western Railway and the Rohilkund and Kumaon Railway. (The Rohilkund and Kumaon Railway Company was guaranteed interest at 4 per cent. during construction and received for 10 years thereafter a subsidy of Rs. 20,000 per annum. This ceased in 1894). While, however, these companies have no guarantee or other direct payment from the Government, they derive some advantage (partly through direct patricipation in profits and partly through reduction of expenses) from the fact that the working of certain State lines has been entrusted to them, the Tirhoot Railway to the former company and the Lucknow-Bareilly Railway to the latter. Their lines can be purchased by the State in 1937 or 1942 on terms which are different in respect of the different sections of the lines, but are, on the whole, much more favourable to the companies than those provided for in the contracts with the guaranteed companies. Failing purchase in 1937 or 1942, the lines will become the property of the State in 1981 on payment of certain amounts. The general administrative control exercised by the State over these companies and the control over expenditure are similar to that which is exercised, as explained above, over guaranteed companies.

APPENDIX C.

The Organisation for Government control.

The initial policy of the Government of India for the construction and working of railways was the establishment of guaranteed railway companies of English domicile. Control over the operations of these companies was at first secured through the appointment of a Consulting Engineer of Guaranteed Railways. Some years later local Consulting Engineers were appointed for the exercise of control over guaranteed railways and over State-owned railways in the construction of which the State had been financially interested and which had been leased to companies for working. These officers combined the duties of supervision and control on behalf of the Government of India and of an Inspector under the Government of India Railway Act. The Government of India were not directly concerned with the ownership of railways until 1868 when the Calcutta and South Eastern Railway was surrendered to the Indian Government under the terms of the contract between the Secretary of State and the Company.

Owing to the Government of India having in 1869 definitely adopted the policy of direct construction and ownership of railways, a period of rapid development of railway construction ensued and it became necessary to relieve the Public Works Department Secretariat of the Government of India in some measure of the detailed control of railways. Accordingly in 1874 a State Railway Directorate was established and the greater portion of the State Railway establishment and business connected with State Railway Administration was transferred to the control of the Director of State Railways, an officer who functioned on much the same lines as the head of a department under the Government of India. The Consulting Engineer to the Government of India for State Railways was at the same time associated with him but all important matters had still to be referred to the Public Works Department. A special Deputy Secretary in the Railway Branch of the Secretariat of the Public Works Department was also appointed to conduct the correspondence between the Government of India and these officers.

Early in 1877 a further change was made in the organisation responsible for the administration and control of State Railways and in the place of one Director of State Railways three Directors of territorial systems and one Director of State Railways Stores were appointed. These territorial divisions comprised the following systems:—

Central	1,179 miles.
Western	927 miles.
and North Eastern	830 miles.

This division of the administration on a territorial basis proved unsatisfactory in practice as it resulted in the issue of conflicting orders as far as the management of open lines was concerned although no difficulty was experienced in the supervision of new construction.

As the number of lines under construction had decreased and in order to remedy the defect just mentioned, it was decided in 1880 to abolish the Directors of the Central and Western Systems and to transfer the work allotted to them to the Consulting Engineers of the neighbouring guaranteed railways. The abolition of these two appointments resulted in an increase in the administrative work of the Secretariat and it was found necessary to raise the status of the Deputy Secretary to whom the powers previously exercised by the Directors had been entrusted, to that of Director General of Railways.

In the revised organisation the Consulting Engineer to the Government of India for State Railways was associated with the Director General of Railways and assisted the latter primarily in an advisory capacity in matters of civil engineering while the Director of Stores similarly acted in matters concerning stores and rolling-stock and at the same time was an adviser in matters affecting establishment. The Director of Traffic was appointed at the same time as an adviser on traffic problems and the accounts work of the department was placed under the Accountant General, Public Works Department.

Government control and supervision of the Guaranteed Railways continued to be exercised by the Local Consulting Engineers to Government. There were five such officers at the time with headquarters at Bombay, Madras, Calcutta, Lahore and Lucknow. The Consulting Engineers at Madras and Bombay worked directly under the Government of these Presidencies, while those at Calcutta, Lahore and Lucknow were under the immediate orders of the Government of India. Under this arrangement practically all powers affecting the finances and day to day management of the

railways were wested either in the Consulting Engineers or in the Government, both for the guaranteed railway companies and later on for State Railways which had been leased for working to railway companies.

The following is a list of the administrative appointments that existed in 1881:—

1. Member of the Governor General's Council, Public Works Department.
2. Secretary, Public Works Department.
3. Deputy Secretary, Railway Branch.
4. Under Secretary, Railway Branch.
5. Consulting Engineer of State Railways.
6. Director General of Railways.
7. Director of Construction.
8. Accountant General, Public Works Department.
9. Director of State Railways, Stores.
10. Three Assistants to the Director General of Railways.
11. Consulting Engineers for Guaranteed Railways at Calcutta, Lahore and Lucknow.
12. Deputy Consulting Engineers for Guaranteed lines, Calcutta, Lahore and Lucknow.

Madras and Bombay.

13. Joint Secretary, Railway Branch and Consulting Engineer for Railways.
14. Deputy Secretary, Public Works Department.

Punjab.

15. Secretary, Public Works Department.

By this time also Local Governments and Administrations had been induced to take a practical interest in the management of railways and in a few cases short extensions had been constructed from funds the interest of which Local Governments had accepted responsibility to pay. Such lines were controlled by the Local Governments concerned under the general supervision of the Government of India.

After 1881 further alterations of a more or less detailed character were made in the administrative organisation and by 1890 the following changes had taken place. Instead of a Deputy Secretary and Under Secretary, Railway Branch, there were then only an Under Secretary and an Assistant Secretary, Railways, in the General Branch. The posts of Director of State Railways, Stores, and Director of Construction had disappeared and in their place there was an Under Secretary, who was an *ex-officio* Deputy Director General of Railways. The post of Accountant General, Railways, had also been abolished and the Accountant General, Public Works Department, was once more made responsible for this work.

Further changes were made in 1897. In that year the post of Director General of Railways was abolished and the post of a Secretary to the Government of India in the Public Works Department was created in its place. The other administrative and secretariat appointments at the headquarters of the Government of India at the time were:—

(1) Director of Railway Construction, and Deputy Secretary and *ex-officio* Director of Stores.

(2) Director of Railway Traffic, and Deputy Secretary and *ex-officio* Director of Railway Statistics.

(3) Two Under Secretaries.

(4) Two Assistant Secretaries.

(5) One Mechanical Assistant.

The post of Consulting Engineer for State Railways was also abolished and his duties transferred to the two Directors. The supervision of the accounts work of the Department, however, still remained under the Accountant General, Public Works Department, who was also an *ex-officio* Deputy Secretary to the Government of India.

In October 1901, Sir Thomas Robertson, C.V.O., was appointed by His Majesty's Secretary of State for India in Council as Special Commissioner for Indian Railways to enquire into and report on the administration and working of Indian Railways. In his report, which became available in 1903, Sir Thomas recommended that the administration of the railways in India should be entrusted to a small Board consisting of a President or Chief Commissioner who should have a thorough practical knowledge of railway working, and should be a member of the Viceroy's Council for railway

matters, and two other Commissioners who should be men of high railway standing and should have a similar training to that of the President. He recommended that the Board should, in addition to the necessary office establishment, be provided with—

(1) A Secretary who should have received a suitable training in the practical working of railways, and who should be *ex-officio* a Secretary to the Government of India.

(2) A Chief Inspector of Railways, to advise on all technical, engineering and mechanical questions.

(3) A suitable number of Government Inspectors.

Sir Thomas Robertson's recommendations were carefully considered by the Governor General in Council and the Secretary of State, and early in 1905 it was decided that the Railway Branch of the Public Works Department of the Government of India should be abolished and that the control of the railway systems in India should be transferred to a Railway Board consisting of three persons, a Chairman and two Members. The Chairman of the Board was vested with the general control of all questions committed to the Railway Board with power to act on his own responsibility subject to confirmation by the Board. The Railway Board were authorised to delegate to the Chairman or a member the power of settling questions which might arise on any tour of inspection, such decision to be recorded subsequently as an act of the Railway Board. The Board was made subordinate and directly responsible to the Government of India in the Department of Commerce and Industry.

The Railway Board assumed office in March 1905 and were provided with the following establishment:—

1. Secretary.
2. Examiner of Accounts.
3. Under Secretary, Construction.
4. Under Secretary, Traffic.
5. Registrar.
6. Director of Railway Construction.

Certain changes were, however, made in the following year and the establishment then consisted of:—

1 Secretary.

3 Assistant Secretaries; one each for Establishment, Construction and Traffic.

1 Registrar.

1 Director of Railway Construction.

1 Railway Accounts Officer.

Sir Thomas Robertson had further suggested in his detailed recommendations that extended powers, both administrative and financial, should be delegated to Boards of Directors of Companies, that the appointments of Consulting Engineers should be abolished and that the work which they performed under the Railways Act should be entrusted to a body of Government Inspectors to be appointed for the purpose. These recommendations were given effect to in a modified form in 1908.

Within a short time after the constitution of the Railway Board, it was found that work was being hampered by having the Commerce and Industry Department between the Railway Board and the Governor General in Council and in October 1908 on the recommendations of the Railway Finance Committee presided over by Sir James Mackay (now Lord Inchcape), the following changes were introduced:—

(1) The appointment of the Chairman of the Railway Board was changed into that of President of the Railway Board and enhanced powers were vested in the President.

(2) The Board with its staff became collectively the Railway Department distinct from and independent of the Department of Commerce and Industry, though remaining under the administrative charge of the Hon'ble Member, Commerce and Industry Department, as the Railway Member.

(3) The President of the Board was given direct access to the Viceroy as if he were a Secretary to the Government of India.

At the same time in consequence of the amalgamation of the Public Works Department Accounts and Civil Audit Establishments under the control of the Finance Member of the Government of India the appointment of Accountant General, Public Works Department, was abolished and the appointment of Accountant General, Railways, was revived.

In 1909 the post of Director of Railway Construction was abolished and the appointment of Chief Engineer with the Railway Board for the purpose of advising the Railway Board on technical matters connected with Civil Engineering was created.

In January 1914, it was decided that the importance of financial and commercial considerations in connection with the control of Indian railway policy justified a modification of the rule that the President and Members of the Railway Board should all be men of large experience in the actual working of railways. It was then decided that in future one member who equally with the others might be appointed President should be selected for commercial and financial experience and a member with the necessary qualifications was appointed.

This arrangement was, however, altered in 1920 when it was decided that all the three members of the Board should possess railway experience. To assist the Board however, in the consideration of financial questions, the post of Financial Adviser to Railway Board was created.

Owing to the expansion of railways in India and the increased work thrown on the Board a second Assistant Secretary, Engineering, was appointed in 1914, and in 1916 the duties of the Construction Branch were divided between one branch dealing with Projects under an Assistant Secretary and a second branch dealing with Way and Works which was sometimes under a separate officer and at other times under the Secretary or Chief Engineer. In 1922 the charge of the Way and Works branch was divided between the Assistant Secretary in charge of Projects and the Assistant Secretary in charge of Stores.

In November 1922, the Board's establishment was strengthened by the appointment of a Chief Mechanical Engineer. This appointment was created to enable the Board to have at headquarters a reliable adviser on matters connected with mechanical engineering.

During 1921 a Committee presided over by Sir William Acworth visited India and one of the questions referred to was the evolution of a satisfactory authority for the administration of the varied functions which the Railway Board had to perform as:—

(*a*) the directly controlling authority of the three State-worked systems aggregating 9,028 miles,

(*b*) representative of the predominant owning partner in systems aggregating 22,949 miles,

(*c*) the guarantor of many of the smaller companies,

(*d*) the statutory authority over all railways in India.

The Acworth Committee recommended in their report:—

(1) that a new Department of Communications responsible for railways, ports and inland navigation, road transport and posts and telegraphs under a Member of Council in charge of Communications should be created,

(2) that under the Member of Council for Communications there should be a technical staff consisting on the railway side of a Chief Commissioner and four Commissioners and that of the four one should be in charge of finance and the organisation and staff of the office and the other three Commissioners should be in charge of three respective divisions, Western, Eastern and Southern,

(3) that the technical staff attached to the Commission should be strengthened specially on the traffic side.

The Government of India, though they did not accept the first recommendation of the Acworth Committee, agreed to the re-organisation of the Railway Board being undertaken on the principles underlying the report of the Acworth Committee. The appointment of a Chief Commissioner was accordingly sanctioned in November 1922, and in accordance with the recommendations of the Acworth Committee he is solely responsible, under the Government of India, for arriving at decisions on technical questions and advising the Government of India on matters of Railway policy; he is not liable to be over-ruled, as the President was, by his colleagues in the Railway Board.

The first duty of the Chief Commissioner was to work out detailed proposals for the re-organisation of the Railway Board and as a first step he made recommendations to the Government of India for the immediate appointment of a Financial Commissioner. This recommendation was strongly endorsed by the Indian Retrenchment Committee and the appointment of the Financial Commissioner was made in April 1923 with the sanction of the Secretary of State. The further proposals of the Chief Commissioner for the re-organisation of the Railway Board were accepted by the Government of India and the Secretary of State and were introduced from the 1st April 1924. It was decided, however, for reasons connected with the present statutory position of the Railway Board, and to avoid confusion with the provisions for a Railway Commission under Chapter V of the Railways Act, to retain the name "Railway Board"

for the headquarters organisation of the Railway Department instead of "Railway Commission" as recommended by the Acworth Committee.

The Railway Board as then reconstituted consisted of the Chief Commissioner as President, the Financial Commissioner and two Members, the Chief Commissioner being Secretary to the Government of India in the Railway Department. The proposal of the Acworth Committee that the Indian Railways should be sub-divided into three territorial divisions with a Commissioner in charge of each was not accepted, and the work of the Members of the Board was divided on the basis of subjects and not on a territorial basis. One Member dealt with technical subjects and the other with general administration, personnel and traffic subjects, the Financial Commissioner representing the Finance Department on the Board and dealing with all financial questions.

The reorganisation carried out in 1924 had for one of its principal objects the relief of the Chief Commissioner and the Members from all but important work so as to enable them to devote their attention to larger questions of railway policy and to enable them to keep in touch with Local Governments, railway administrations and public bodies by touring to a greater extent than they had been able to do in the past. This object was effected by placing a responsible Director at the head of each of the main branches of the Board's work, namely Civil Engineering, Mechanical Engineering, Traffic and Establishment. The former Chief Engineer and the Chief Mechanical Engineer who had been employed mainly in consultative work, became Directors and together with the Directors of Traffic and Establishment have been made responsible for the direct disposal of the work of their branches under the general orders of the Railway Board.

The posts of Joint Secretary and 4 Assistant Secretaries were replaced by 6 Deputy Directors working under the Directors and in charge of branches dealing with Establishment, Works, Projects, Stores, Statistics and Traffic. One Assistant Director was also added to supervise the Technical Branch and the Drawing Office. The disposal of the general work of the Railway Board was provided for by the continuance of the post of Secretary in whose name all letters and orders of the Board are issued. The position of the Board as a Department of Government of India has been maintained and it works under the Member for Commerce and Railways. As already stated the Chief Commissioner is the Secretary to the Government of India in the Railway Department and orders issued by the Board over the signature of the Secretary are orders of the Government of India.

Experience of the working of this organisation during 1924-25 and the decision agreed to by the Legislative Assembly in September 1924 to separate railway finances from the general finances of the country made it necessary to appoint a Deputy Director and an Assistant Director of Finance. An Assistant Director of Statistics was also added during that year. Later a Director of Finance was added to the establishment occupying, as regards disposal of work, the same position as the Directors referred to above.

Further experience of the reduction of work resulting from the large delegation of powers and responsibility to the Agents of State-managed Railways and the Board of Directors of Company-managed railways enabled a re-arrangement of work to be made during 1925-26 accompanied by a reduction in the staff. Under this re-arrangement the posts of 3 Deputy Directors, an Assistant Director and the Assistant Secretary were held in abeyance. The personnel work was transferred from the Director of Establishment to the Secretary and a temporary post of Deputy Secretary was created. Further a separate technical office was established to take charge of the technical work of the engineering branches. The Technical Officer also acted as *ex-officio* Secretary to the permanent Standardisation Committees which were appointed to deal progressively with all questions of standards of equipment.

This arrangement was found, however, to be inadequate. In addition to the general increase in work in the Railway Board's Office consequent on the taking over of the East Indian, Great Indian Peninsula and Burma Railways under State control labour problems had assumed such importance and were so rapidly increasing in number and complexity that it was not possible to deal with them effectively without the appointment of additional staff. Accordingly it was decided to create an additional post of Member of the Railway Board to deal with staff and labour questions; leaving the Member in charge of Traffic, who had hitherto been dealing with establishment matters, to devote his whole time to questions relating to the Transportation and Commercial aspects of Railway work.

It was also decided to revive the post of Deputy Director, Establishment, so as to free the Director of Establishment from this work, and thus enable him to give his time to the study of problems of railway labour. Of the two posts of Deputy Directors of Traffic and Statistics one was held in abeyance from 1925 and the two posts have since been amalgamated.

In October 1930 the compilation of statistical information which used previously to be done in the Board's office was entrusted to the Controller of Railway Accounts, and

with the transfer of this work, the post of Assistant Director of Satistics was also transferred from the Railway Board's office to that of the Controller of Railway Accounts.

In 1931-32, in view of the decline in traffic earnings and in the number and magnitude of Engineering works owing to financial stringency, the possibility of making temporary reductions in the organisation of the Board was explored and as a result of this examination and with the approval of the Secretary of State for India the following superior posts have been held in abeyance with effect from the dates noted below:—

Member, Traffic—29th March 1932.

Member, Engineering—5th May 1932.

Director, Civil Engineering—4th December 1931.

Director, Mechanical Engineering—1st April 1932.

Deputy Secretary—1st March 1932.

Assistant Director of Finance—31st July 1931.

It was also decided, for so long as the post of Member Traffic, was held in abeyance, to create an additional temporary post of Deputy Director, Traffic, with effect from the 1st April 1932.

The reorganisation was complete in May 1932, and then the superior staff in the office of the Railway Board consisted of the Chief Commissioner, the Financial Commissioner, 1 Member, 3 Directors, 6 Deputy Directors and 1 Secretary.

Shortly after this, however, it was recognised that unless the work was to be seriously delayed, it would be impossible for the Chief Commissioner who had taken over the duties of the Member Engineering, after that post had been held in abeyance, to devote the time that was necessary for the disposal of Civil Engineering business in the Railway Board's office and it was accordingly decided to revive the post of Director of Civil Engineering, which was being held in abeyance since December 1931, with effect from November 1932, from which date the post of Deputy Director, Civil Engineering is being held in abeyance. It was also decided in October 1932 to convert the post of Chief Superintendent to that of Assistant Secretary.

The existing superior staff in the Railway Board's office consists of the Chief Commissioner, the Financial Commissioner, 1 Member, 4 Directors, 5 Deputy Directors, 1 Secretary and 1 Assistant Secretary.

For the conduct of the work connected with the production of standard designs and specifications for all classes of materials, plant and rolling stock in use on Indian Railways, a Central Standards Office for Railways was formed in January 1930 for a period of 5 years as an experimental measure. On the formation of the above office the post of Technical Officer with the Railway Board was abolished.

APPENDIX D.

Resolution regarding the separation of railway from General Finances, adopted by the Legislative Assembly on the 20th September 1924.

" This Assembly recommends to the Governor General in Council that in order to relieve the general budget from the violent fluctuations caused by the incorporation therein of the railway estimates and to enable railways to carry out a continuous railway policy based on the necessity of making a definite return to general revenues on the money expended by the State on Railways.

(1) The railway finances shall be separated from the general finances of the country and the general revenues shall receive a definite annual contribution from railways which shall be the first charge on the net receipts of railways.

(2) The contribution shall be based on the capital at charge and working results of commercial lines, and shall be a sum equal to one per cent. on the capital at charge of commercial lines (excluding capital contributed by companies and Indian States) at the end of the penultimate financial year *plus* one-fifth of any surplus profits remaining after payment of this fixed return, subject to the condition that, if in any year railway revenues are insufficient to provide the percentage of one per cent. on the capital at charge surplus profits in the next or subsequent years will not be deemed to have accrued for purposes of division until such deficiency has been made good.

The interest on the capital at charge of, and the loss in working, strategic lines shall be borne by general revenues and shall consequently be deducted from the contribution so calculated in order to arrive at the net amount payable from railway to general revenues each year.

(3) Any surplus remaining after this payment to general revenues shall be transferred to a railway reserve; provided that if the amount available for transfer to the railway reserve exceeds in any year three crores of rupees only two-thirds of the excess over three crores shall be transferred to the railway reserve and the remaining one-third shall accrue to general revenues.

(4) The railway reserve shall be used to secure the payment of the annual contribution to general revenues; to provide, if necessary, for arrears of depreciation and for writing down and writing off capital; and to strengthen the financial position of railways in order that the services rendered to the public may be improved and rates may be reduced.

(5) The railway administration shall be entitled, subject to such conditions as may be prescribed by the Government of India, to borrow temporarily from the capital or from the reserves for the purpose of meeting expenditure for which there is no provision or insufficient provision in the revenue budget subject to the obligation to make repayment of such borrowings out of the revenue budgets of subsequent years.

(6) A Standing Finance Committee for Railways shall be constituted consisting of one nominated official member of the Legislative Assembly who should be chairman and eleven members elected by the Legislative Assembly from their body. The members of the Standing Finance Committee for Railways shall be *ex-officio* members of the Central Advisory Council, which shall consist, in addition, of not more than one further nominated official member, six non-official members selected from a panel of eight selected by the Council of State from their body and six non-official members selected from a panel of eight elected by the Legislative Assembly from their body.

The Railway Department shall place the estimate of railway expenditure before the Standing Finance Committee for Railways on some date prior to the date for the discussion of the demand for grants for railways and shall, as far as possible, instead of the expenditure programme revenue show the expenditure under a depreciation fund created as per the new rules for charge to capital and revenue.

(7) The railway budget shall be presented to the Legislative Assembly if possible in advance of the general budget and separate days shall be allotted for its discussion, and the Member in charge of Railways shall then make a general statement on railway accounts and working. The expenditure proposed in

the railway budget, including expenditure from the depreciation fund and the railway reserve, shall be placed before the Legislative Assembly in the form of demands for grants. The form the budget shall take after separation, the detail it shall give and the number of demands for grants into which the total vote shall be divided shall be considered by the Railway Board in consultation with the proposed Standing Finance Committee for Railways with a view to the introduction of improvements in time for the next budget, if possible.

(8) These arrangements shall be subjected to periodic revision but shall be provisionally tried for at least three years.

(9) In view of the fact that the Assembly adheres to the resolution passed in February 1923, in favour of State management of Indian Railways, these arrangements shall hold good only so long as the East Indian Railway and the Great Indian Peninsula Railway and existing State-managed railways remain under State management. But if in spite of the Assembly's resolution above referred to Government should enter on any negotiations for the transfer of any of the above railways to Company management such negotiations shall not be concluded until facilities have been given for a discussion of the whole matter in the Assembly. If any contract for the transfer of any of the above railway to Company management is concluded against the advice of the Assembly, the Assembly will be at liberty to terminate the arrangements in this Resolution.

Apart from the above convention this Assembly further recommends—

(i) that the railway services should be rapidly Indianised, and further that Indians should be appointed as Members of the Railway Board as early as possible, and

(ii) that the purchases of stores for the State Railways should be undertaken through the organisation of the Stores Purchase Department of the Government of India."

APPENDIX E.

Government of India, Railway Department, Resolution No. 2131-F., dated the 19th February 1925, on the subject of the financing of branch lines of Railways.

The Governor General in Council, with the sanction of His Majesty's Secretary of State for India, is pleased to issue the following orders on the subject of financing of Branch Lines, in suppression of all previous orders on the subject.

1. Branch and Feeder Lines are constructed under an agreement by which the State guarantees a minimum return on the capital, or alternatively, undertakes that the line shall receive, out of the earnings of the main line from traffic contributed by the branch, such a sum, known as a rebate, as will make up the total earnings of the branch to a given sum, while the branch in each case shares with the main line any profits exceeding the guaranteed minimum.

2. This method of encouraging the construction of lines originated 30 years ago simply because the Government of India was unable to furnish the necessary capital.

3. The Acworth Committee pointed out that this method, while enabling lines to be built which would otherwise not have been built, has no other merit. The financial terms usual before the war are now quite inadequate and if the system is to continue they will have to be revised. All the witnesses before the Committee who asked for a revision of the terms admitted that, if the main line were in a position to build a given branch itself, they would prefer that it should be done by the main line rather than that it should be done as a separate undertaking.

4. Amongst the disadvantages pointed out by the Committee are the following:—

(i) The Branch Line Company is usually a fifth wheel to the coach. It implies in some cases a separate construction staff; it always implies a separate Board of Directors, and separate accounts.

(ii) Where the branch is worked by the main line, if its Directors feel that the management is unsatisfactory, they not only make representations to the main line administration, but in the last resort can appeal to the Railway Board which does not make for harmony.

(iii) Capital raised by a small private undertaking, even with a Government guarantee, will cost more than money raised by the State.

(iv) Inconceivable confusion results from the multiplication of independent Railway Companies—each company, small or great, desires to reserve for itself a separate sphere of influence; and jealously demands that, if any new-comer intrudes into that sphere, he shall pay toll to the original concessionaire. This only complicates a situation which ought to be considered solely from the point of view of the public interest. New proposals for the extension or connection of lines by small independent companies are either refused owing to protests by the old company or only permitted on a basis of elaborate accounting between the new company and the old for the profits which hypothetically would have belonged to the old line had the new line not been opened.

5. The only arguments urged in favour of the Branch Line Companies were:—

(i) That money had been raised which the Government of India was unable to furnish.

(ii) That a claim was made that the Branch Line Company obtained from local sources money that would never be subscribed to a Government loan.

(iii) That there may be cases of a Branch Line of smaller gauge *worked independently*, which the Branch Line Company can operate more economically than a main line.

6. The Acworth Committee, therefore, so far from approving of this system considered that the aim of the Government should be to reduce by amalgamation the number of existing companies and that it should only be in cases where the State cannot or will not provide adequate funds that private enterprise in the direction should be encouraged.

7. The disadvantages pointed out by the Acworth Committee required to be even further amplified. The existing Branch Line Companies have ceased for some time to raise additional capital for capital requirements. They have either obtained overdrafts from various Banks for this purpose at heavy rates of interest or issued debentures at special rates of interest (usually about 7 per cent.) or in several cases asked for money to

be advanced to them by the Railway Board. So far, therefore, from reducing the amount that the Government of India have to raise in the open market, they are at present increasing that amount.

8. Another serious disadvantage which is not mentioned by the Acworth Committee is that the main line usually works the Feeder or Branch Line for a remuneration which, in most cases, is limited to a maximum of a fixed percentage of the gross earnings of the Branch Line (usually 40 per cent. or 50 per cent.)—terms of remuneration which at present are grossly inadequate. The result of this arrangement is that many of the main lines whose working expenses are from 60 to 80 per cent. of the gross earnings are saddled with heavy expenditure which ought to have been debited to Branch Line Companies. Where the Branch Line Companies are "successful", that is, where the shares stand at a high figure, their profits are inflated owing to their working expenses being thus artificially reduced. Again, where in the case of less "prosperous" Branch Line Companies, the Government has to make a direct subsidy in order to make up the guaranteed interest on the capital, the amount paid by way of subsidy does not reveal the true loss of the Government in connection with the Branch Line Company. To this subsidy should be added also the additional loss incurred from the main line working the Branch Line at less than the actual cost. Even this, however, does not give a complete statement of the loss sustained by Government in connection with these Companies. These Companies have been supplied with land free of charge and the cost of such land is not taken into account either in the Capital or the Revenue Accounts of the Companies concerned.

9. The only real argument in favour of these Companies is that they must be utilised in cases where the Government itself is unable or declines to raise the necessary amount of capital for new constructions. It is doubtful whether such a position is likely to recur in the future. It is admitted that to use the agency of these Companies is a far more expensive method of raising money for the construction of railways than direct Government loans can ever be. The amount of assistance given by Branch Line Companies in the past has been trivial; the total amount of capital raised through the agency of Branch Line Companies has only been about Rs. $10\frac{3}{4}$ crores—an amount which in itself is less than the lapse that occurred last year in the provision for capital expenditure in the Railway Budget.

10. The difficulties and complications now experienced in connection with these Branch Line Companies are out of all proportion to the insignificant financial facilities offered by the Companies. The Government of India have therefore decided that the Branch line policy should be abandoned and that an endeavour should be made to reduce the number of the existing Branch Line Companies. If on any occasion the Government of India should be unable to find funds for construction (which is not the case at present), and should it be considered advisable to tap fresh sources for subscription to railway loans by offering terms different from those given to the ordinary Government loans, that is, by offering not only a fixed rate of interest, but a share in the profits of a particular Branch Line, there appears to be no particular advantage of using a financial half-way house specially to float a loan on such terms; there appears to be no reason why the Government should not float the loan direct. But it will probably be found sufficient to raise short term debentures at a high rate of interest—to be liquidated when the loan market is favourable—a procedure adopted now by the Branch Line Companies, but at a higher rate of interest than would be necessary for the Government.

11. There remains the case of the District Board Railways for which some of the capital or the security for the capital is secured by a special cess levied by the District Board throughout the district.

The Acworth Committee pointed out that where a District Board was the promoter of a new Branch Line, considerations other than purely commercial came into play with the result of further complications and confusion. In a footnote to the report they referred to the views expressed by the Madras Government who had drawn attention to a case in which, although no short-circuiting was involved, there had been a delay of over 10 years in arriving at a decision in regard to the terms for working a District Board Railway by the South Indian Railway Company. The amount of capital raised by District Boards for such lines has been only Rs. 137 lakhs while the amount raised by Company lines subsidised by District Boards amounts to Rs. $2\frac{1}{4}$ crores. These amounts are insignificant as compared with the total capital raised by the Government and it is clear that the relief afforded to the Government of India in raising the loans is quite disproportionate to the great complications which have resulted in the working of the railway administration. Loans raised direct by the District Boards do not relieve the market of the Government of India; the money is ultimately borrowed from the Government of India.

12. The legal position regarding the powers of District and Local Boards in the matter of railway construction and management depends in part on the Indian Railways Act, 1890, which, in the absence of express exclusion of its application, extends to all District Board railways and, in part on the nature of the provision made in the matter

in the District or Local Boards Act of the province concerned. It is only in the Madras Presidency that the question has assumed prominence and it will suffice to indicate briefly the nature of the provisions contained in the Madras Local Boards Act, 1920. Action under section 113 of that Act can only be taken " with the previous sanction of the Government of India." Having obtained such sanction, a District Board may either itself construct and maintain a railway within, or partly within, the local area under the control of the Board, or may subscribe to any debenture loan raised by the Government of India or by any other local authority or by any company for the construction or maintenance of any railway which the Board considers likely to be of benefit to the district, or may guarantee the payment from the district fund of such sums as it shall think fit as interest on capital expended on any such railway (that is, whether the railway is constructed by the Government of India or by any other local authority or by a Company).

Section 236 of the same Act provides that the accumulations of a local railway cess may be utilised for all or any of the purposes specified in section 113, including the guaranteeing of payment of interest on capital spent on a railway.

A District Board in Madras, therefore, can guarantee the payment from the district fund of the money sufficient to make up minimum interest on capital expended on a railway within its area whether such railway is constructed by the Government of India or by a Company, the only disadvantage attaching to this particular form of guarantee being that the Act does not make the payment of the guaranteed interest a first charge on the District Board Fund.

13. The Government of India could not reasonably use their powers under the Indian Railways Act, 1890, or under, *e.g.*, section 113 of the Madras Local Boards Act, 1920, to prevent a District Board or a local body from constructing a light railway or a tramway which had no physical connection with any existing main line and which that local body proposed to work itself or through a local company. But as things stand at present there is no reason for continuing the practice under which District Boards are allowed to make money out of Branch Lines connected with a main line when they themselves cannot make any arrangements for the working of the lines and require to have them run by the main lines.

14. These District Board railways must not be confused with the light and feeder railways which constitute a provincial subject under the Devolution Rules. The provincial subject in question comprises " light and feeder railways and extra-municipal tramways in so far as provision for their construction and management is made by provincial legislation ". That is to say, it comprises only individual light or feeder railways or extra-municipal tramways for the construction and management of which specific provision has been made by an Act of the local legislature of the province concerned. Hitherto, no such legislation has been enacted with the result that the entry in question in the provincial schedule, as also the qualifying words to entry 5 (*a*)* in the central schedule, have no operation, and all existing railways of every description are included in the central subject defined in the last-named entry. It should also be observed that the provincial subject in question is " subject to legislation by the Indian Legislature in the case of any such railway or tramway which is in physical connection with a main line or is built on the same gauge as an adjacent line ", the effect being that a provincial bill designed to provide for the construction of a light or feeder railway or extra-municipal tramway in physical connection with a main line or built on the same gauge as an adjacent main line would require the previous sanction of the Governor General under clause (*f*) of sub-section (3) of section 80-A of the Government of India Act; and it may be presumed that few occasions are likely to arise in which provision will be made by local legislation for the construction of a light or feeder railway not answering one or other of these descriptions.

15. The proposal set forth in this Resolution is not designed to evade the legitimate operation of the legal position described, in the case of District Board railways, in paragraph 12 and in the case of provincial light and feeder railways, in paragraph 14; but it follows from the proposal that Local Governments and District or Local Boards should not, in the absence of special circumstances, be encouraged to build branch or feeder lines. In other words, the normal procedure will be the construction by the Government of India, or, at its cost, by a Company, of a branch line which a District Board or Local Government desires to have constructed and is prepared to guarantee. But, should the railway programme not permit the construction of such a line within a reasonable time, the possibility of permitting a District Board or Local Government to construct it from its own funds would require consideration.

Unremunerative Lines.

16. The above proposals relate to the procedure adopted in the past and the procedure which it is proposed to adopt in the future for the financing of the con-

* " Railways and extra-municipal tramways, in so far as they are not classified as provincial subjects under entry 6 (*d*) of Part II of this Schedule."

struction of branch or feeder lines expected to prove remunerative from the point of view of railway earnings only. But there are cases where the Local Governments or local authorities may desire that a line should be constructed which will not be remunerative on railway earnings and the construction of which is desired by them for purely local reasons on account of the administrative advantages it is likely to confer or for the development of a particular area. It is proposed that in future the Railway Board in such circumstances should have power to arrange for the construction of the line from railway funds if the Local Government or the local authority guarantees the Railway Board against loss. The guarantee would be to the effect that the local authority would make up the difference between the net earnings and the interest and other charges payable. As it is not desirable that the Central Government should make any profit out of such contributions by local authorities, it is also proposed that where contributions have been made by a local authority for this purpose the repayment of such contributions should be a first charge on any net profits subsequently realised from the line, should the line prove remunerative.

17. The Central Government must, however, retain the power to decide whether a line is to be built or not; the proposals in the preceding paragraph must not be taken to imply that a Local Government by giving a guarantee can require the Railway Board to construct a line. Proposals of a Local Government might run counter to the general railway policy or might take the form of short-circuiting railway traffic and so lead to a reduction of receipts from existing lines.

18. These proposals have been circulated to Local Governments and have been generally welcomed by them as affording a suitable method of reconciling central and local interests and of providing for local bodies and Local Governments a method of securing the construction of railways which may be required for purely local reasons, and which, while not likely to prove remunerative on purely railway earnings, are likely to provide such indirect benefits to Local Governments and local bodies as will more than repay the amounts paid under the guarantee. Several such arrangements have already been made with Local Governments.

APPENDIX F.

I.—GAZETTED OFFICERS.

I.—Statement of Gazetted Officers and Officers of corresponding rank employed on Class I Railways, Railway Board and other Railway Offices (excluding H. E. H. the Nizam's State and Jodhpur Railways) on the 31st March 1933 as compared with 31st March 1932.

Item.	A. B.		B. N.		B. & N. W.		B., B. & C. I.		BURMA.		E. B.		E. I.		G. I. P.		M. & S. M.		N. W.		R. & K.		S. I.		Rly. Board and Miscellaneous officers.		TOTAL.	
	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1. *Agency Department*—																												
1·01. Europeans	2	2	4	5	3	3	8	9	3	4	4	3	4	5	6	6	5	5	5	6	1	1	3	3	1	2	49	54
1·02. Indians—																												
(*a*) Hindus	..	..	2	2	..	..	1	..	..	..	2	2	2	1	1	2	..	1	1	1	..	..	3	3	..	..	12	12
(*b*) Muslims	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	..	..	..	..	..	1	2
(*c*) Anglo-Indians and Domiciled Europeans.	..	..	1	1	..	..	..	..	..	..	1	1	1	2	..	..	2	2	1	..	..	..	1	1	..	..	7	7
(*d*) Sikhs	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
(*e*) Indian Christians	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(*f*) Other classes	..	..	..	..	..	..	..	..	1	1	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	2	2
(*g*) Total	..	..	3	3	..	..	1	..	1	1	4	4	3	3	2	3	2	3	3	3	..	..	4	4	..	..	23	24
1·03. GRAND TOTAL	2	2	7	8	3	3	9	9	4	5	8	7	7	8	8	9	7	8	8	9	1	1	7	7	1	2	72	78
2. *Accounts Department*—																												
2·01. Europeans	..	..	6	6	6	6	8	8	4	4	2	2	4	5	8	6	7	7	..	..	1	1	4	6	..	1	50	52
2·02. Indians—																												
(*a*) Hindus	..	..	5	6	2	2	2	2	1	1	8	7	7	6	2	2	2	2	5	1	2	2	6	8	1	5	43	44
(*b*) Muslims	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	3	1	4	2
(*c*) Anglo-Indians and Domiciled Europeans.	..	..	1	1	..	..	1	1	1	1	1	..	8	5	1	1	2	2	1	2	..	..	..	..	..	..	16	13
(*d*) Sikhs	..	..	1	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	1	3
(*e*) Indian Christians	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
(*f*) Other classes	..	..	..	..	..	..	1	1	..	..	..	..	..	..	1	1	1	1	..	..	..	..	..	..	..	..	3	3
(*g*) Total	..	..	7	8	2	2	5	5	2	2	9	7	15	12	4	4	5	5	7	5	2	2	6	8	4	6	68	66
2·03. GRAND TOTAL	..	..	13	14	8	8	13	13	6	6	11	9	19	17	12	10	12	12	7	5	3	3	10	14	4	7	118	118
3. *Engineering Department*—																												
3·01. Europeans	13	13	49	51	**21**	18	35	37	29	31	25	24	45	55	52	56	30	33	49	53	3	4	28	28	10	13	389	416
3·02. Indians—																												
(*a*) Hindus	5	5	11	15	3	3	13	13	2	2	13	15	28	31	5	4	15	15	48	41	..	..	11	11	2	1	156	156
(*b*) Muslims	2	2	1	2	2	2	..	..	1	1	1	1	5	5	5	5	..	..	8	6	1	1	..	..	..	..	26	25
(*c*) Anglo-Indians and Domiciled Europeans.	3	3	7	7	1	1	1	..	3	3	..	1	5	4	..	..	1	1	7	6	..	..	..	..	1	..	29	26
(*d*) Sikhs	1	1	..	..	..	..	1	..	..	..	1	1	..	..	..	..	..	..	4	4	..	..	..	..	..	..	7	6
(*e*) Indian Christians	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	1	..	..	1	1	..	..	1	1	..	..	5	3
(*f*) Other classes	..	..	1	1	..	..	2	2	..	..	..	..	1	1	2	3	..	..	..	..	..	..	..	1	1	..	7	8
(*g*) Total	11	11	20	25	6	6	17	15	6	6	15	18	39	41	15	13	16	16	68	58	1	1	12	13	4	1	230	224
3·03. GRAND TOTAL	24	24	69	76	27	24	52	52	35	37	40	42	84	96	67	69	46	49	117	111	4	5	40	41	14	14	619	640

APPENDIX F—*contd.*

I.—*Statement of Gazetted Officers and Officers of corresponding rank employed on Class I Railways, Railway Board and other Railway Offices (excluding H. E. H. the Nizam's State and Jodhpur Railways) on the 31st March 1933 as compared with 31st March 1932*—contd.

Item.	A. B.		B. N.		B. & N. W.		B. B. & C. I.		Burma.		E. B.		E. I.		G. I. P.		M. & S. M.		N. W.		R. & K.		S. I.		Ry. Board and Miscellaneous officers.		Total.	
	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
4. *Transportation*—																												
4·01. Europeans	8	7	27	29	11	12	25	25	18	20	18	19	43	34	48	49	19	20	32	32	3	3	14	13	8	5	274	268
4·02. Indians—																												
(a) Hindus	4	4	14	12	1	1	7	7	..	..	11	11	12	14	10	7	6	9	15	11	..	..	10	11	1	2	91	89
(b) Muslims	1	1	5	5	1	1	2	2	..	..	4	4	5	5	4	3	..	..	7	6	1	1	1	1	5	3	36	32
(c) Anglo-Indians and domiciled Europeans.	2	3	4	4	..	..	2	2	1	2	3	3	5	7	5	7	3	3	4	2	..	..	4	3	1	2	34	38
(d) Sikhs	..	..	1	1	..	..	1	1	..	..	..	..	1	..	..	..	2	..	2	1	..	..	..	..	..	..	7	3
(e) Indian Christians	..	..	1	1	..	..	2	2	..	..	..	..	1	1	..	..	..	..	3	1	..	..	..	..	..	..	7	5
(f) Other Classes	..	..	..	..	..	..	2	3	6	6	..	..	1	..	..	..	1	..	..	1	..	..	..	..	..	..	10	10
(g) Total	7	8	25	23	2	2	16	17	7	8	18	18	25	27	19	17	12	12	31	22	1	1	15	15	7	7	185	177
4·03. Grand Total	15	15	52	52	13	14	41	42	25	28	36	37	68	61	67	66	31	32	63	54	4	4	29	28	15	12	459	445
5. *Commercial*—																												
5·01. Europeans	1	1	Included under Transportation.		1	2	Included under Transportation.						7	6	12	15	Included under Transportation.			11	Included under Transportation.		3	3	..	..	24	38
5·02. Indians—																												
(a) Hindus	..	..			..	..							3	3	4	4				3			5	4	..	..	12	14
(b) Muslims	..	..			..	..							1	..	..	..				2			..	..	..	..	1	2
(c) Anglo-Indians and domiciled Europeans.	..	..			1	..							5	6	2	2				..			..	1	..	..	8	9
(d) Sikhs	..	..			..	..							..	..	..	..				1			..	..	..	..	..	1
(e) Indian Christians	..	..			..	..							..	..	..	..				1			..	..	..	..	..	1
(f) Other Classes	..	..			..	..							..	..	..	..				..			..	..	..	..	..	..
(g) Total	..	..			1	..							9	9	6	6				7			5	5	..	..	21	27
5·03. Grand Total	1	1			2	2							16	15	18	21				18			8	8	..	..	45	65
6. *Mechanical Engineering*—																												
6·01. Europeans	7	8	24	25	13	14	29	29	17	20	17	19	45	39	19	21	24	24	45	38	3	2	17	17	4	4	264	260
6·02. Indians—																												
(a) Hindus	2	1	4	4	..	..	3	3	..	..	5	5	9	9	6	7	1	1	4	6	..	..	5	4	..	..	39	40
(b) Muslims	1	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	..	..	..	..	..	4	4
(c) Anglo-Indians and domiciled Europeans.	1	1	..	..	..	..	..	..	2	1	1	..	5	4	1	1	..	..	1	1	..	..	..	..	..	..	11	8
(d) Sikhs	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..
(e) Indian Christians	..	..	..	..	..	..	..	..	..	..	2	2	1	1	1	1	..	..	..	..	..	..	..	..	..	..	4	4
(f) Other Classes	..	..	1	1	..	..	..	..	..	..	1	1	..	..	..	..	1	1	..	..	..	..	..	..	..	..	3	3
(g) Total	4	3	6	6	..	..	3	3	2	1	9	8	15	14	8	9	2	2	8	9	..	..	5	4	..	..	62	59
6·03. Grand Total	11	11	30	31	13	14	32	32	19	21	26	27	60	53	27	30	26	26	53	47	3	2	22	21	4	4	326	319

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
7. *Stores Department*—																												
7·01. Europeans	1	1	5	6	1	1	6	6	2	2	3	4	10	8	5	5	6	6	6	8	..	..	3	3	..	..	48	50
7·02. Indians—																												
(*a*) Hindus	..	..	1	1	..	..	2	1	1	1	2	1	2	2	..	..	1	1	3	3	..	..	1	1	..	..	13	11
(*b*) Muslims	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	..	..	..	..	..	..	..	..	..	2	2
(*c*) Anglo-Indians and Domiciled Europeans.	..	..	2	2	..	..	..	..	1	1	3	2	2	3	..	..	..	..	..	..	..	..	3	2	..	..	11	10
(*d*) Sikhs	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(*e*) Indian Christians	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(*f*) Other Classes	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	1	1
(*g*) Total	..	..	3	3	..	..	2	1	2	2	5	3	4	5	2	2	2	2	3	3	..	..	4	3	..	..	27	24
7·03. GRAND TOTAL	1	1	8	9	1	1	8	7	4	4	8	7	14	13	7	7	8	8	9	11	..	..	7	6	..	..	75	74
8. *Other Departments*—																												
8·01. Europeans	10	9	17	18	3	2	12	11	9	9	1	1	31	36	6	7	12	11	1	1	..	..	5	6	19	20	126	131
8·02. Indians—																												
(*a*) Hindus	6	6	3	3	..	..	3	3	..	..	4	5	11	12	4	3	2	2	2	1	..	..	2	2	7	6	44	43
(*b*) Muslims	..	..	..	..	..	..	1	..	..	..	..	1	2	1	..	..	..	..	1	1	..	..	..	..	..	..	4	3
(*c*) Anglo-Indians and Domiciled Europeans.	2	2	..	1	..	..	..	..	1	1	1	..	6	6	1	1	..	..	..	..	..	..	..	..	3	5	14	16
(*d*) Sikhs	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	1	1	..	..	..	..	..	..	2	2
(*e*) Indian Christians	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	2	..	..	..	..	..	..	..	..	3	3
(*f*) Other Classes	..	..	..	..	..	..	3	4	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	1	1	5	6
(*g*) Total	8	8	3	4	..	..	7	7	1	1	5	6	20	20	7	6	4	4	4	3	..	..	2	2	11	12	72	73
8·03. GRAND TOTAL	18	17	20	22	3	2	19	18	10	10	6	7	51	56	13	13	16	15	5	4	..	..	7	8	30	32	198	204
9. *Total*—																												
9·01. Europeans	42	41	132	140	59	58	123	125	82	90	70	72	189	188	156	165	103	106	138	149	11	11	77	79	42	45	1,224	1,269
9·02. Indians—																												
(*a*) Hindus	17	16	40	43	6	6	31	29	4	4	45	46	74	78	32	29	27	31	78	67	2	2	43	44	11	14	410	409
(*b*) Muslims	4	4	7	8	3	3	3	2	1	1	5	6	13	11	11	10	..	..	20	20	2	2	1	1	8	4	78	72
(*c*) Anglo-Indians and Domiciled Europeans.	8	9	15	16	2	1	4	3	9	9	10	7	37	37	10	12	8	8	14	11	..	..	8	7	5	7	130	127
(*d*) Sikhs	1	1	2	2	..	..	2	1	..	..	2	2	2	2	..	..	2	..	8	8	..	..	..	..	..	..	19	16
(*e*) Indian Christians	..	..	1	1	..	..	3	3	..	..	2	2	2	2	5	3	2	2	4	3	..	..	1	1	..	..	20	17
(*f*) Other Classes	..	..	2	2	..	..	8	10	7	7	1	1	2	1	5	6	4	3	..	1	..	..	..	1	2	1	31	33
(*g*) Total	30	30	67	72	11	10	51	48	21	21	65	64	130	131	63	60	43	44	124	110	4	4	53	54	26	26	688	674
9·03. GRAND TOTAL	72	71	199	212	70	68	174	173	103	111	135	136	319	319	219	225	146	150	262	259	15	15	130	133	68	71	1,912	1,943

APPENDIX F—*contd.*

I.—*Statement of Gazetted Officers and Officers of corresponding rank employed on Class I Railways, Railway Board and other Railway Offices (excluding H. E. H. the Nizam's State and Jodhpur Railways) on the 31st March 1933 as compared with 31st March 1932*—concld.

Item.	A. B.		B. N.		B. & N.-W.		B., B. & C. I.		BURMA.		E. B.		E. I.	
	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
10. *Increase (+) and Decrease (—)*														
10·01. Europeans	+1	..	—8	..	+1	..	—2	..	—8	..	—2	..	+1	..
10·02. Indians—														
(*a*) Hindus	+1	..	—3	..	..	..	+2	..	..	..	—1	..	—4	..
(*b*) Muslims	..	..	—1	..	..	..	+1	..	..	..	—1	..	+2	..
(*c*) Anglo-Indians and Domiciled Europeans	—1	..	—1	..	+1	..	+1	..	..	..	+3	..	..	..
(*d*) Sikhs	..	..	..	..	..	..	+1	..	..	..	..	..	..	..
(*e*) Indian Christians	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(*f*) Other Classes	..	..	..	..	..	..	—2	..	..	..	..	..	+1	..
(*g*) Total	..	..	—5	..	+1	..	+3	..	..	..	+1	..	—1	..
10·03. GRAND TOTAL	+1	..	—13	..	+2	..	+1	..	—8	..	—1	..	..	..
11. *Percentage of Total*—														
11·01. Europeans	58·3	57·8	66·3	66·0	84·3	85·3	70·7	72·2	79·6	81·1	51·9	52·9	59·3	58·9
11·02. Indians—														
(*a*) Hindus	23·6	22·5	20·1	20·3	8·6	8·8	17·8	16·8	3·9	3·6	33·3	33·9	23·2	24·5
(*b*) Muslims	5·6	5·6	3·5	3·8	4·3	4·4	1·7	1·2	1·0	0·9	3·7	4·4	4·1	3·5
(*c*) Anglo-Indians and Domiciled Europeans.	11·1	12·7	7·5	7·6	2·8	1·5	2·3	1·7	8·7	8·1	7·4	5·2	11·6	11·6
(*d*) Sikhs	1·4	1·4	1·1	0·9	..	..	1·2		..	..	1·5	1·5	0·6	0·6
(*e*) Indian Christians	..	..	0·5	0·5	..	..	1·7	8·1	..	..	·5	1·4	0·6	0·6
(*f*) Other Classes	..	..	1·0	0·9	..	..	4·6		6·8	6·3	0·7	0·7	0·6	0·3

Item.	G. I. P.		M. & S. M.		N. W.		R. & K.		S. I.		Rly. Board and Miscellaneous officers.		TOTAL.	
	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.
1	16	17	18	19	20	21	22	23	24	25	26	27	28	29
10. *Increase (+) and Decrease (—)*														
10·01. Europeans	—9	..	—3	..	—11	..	..	..	—2	..	—3	..	—45	..
10·02. Indians—														
(*a*) Hindus	+3	..	—4	..	+11	..	..	..	—1	..	—3	..	+1	..
(*b*) Muslims	+1	..	..	..	..	..	..	..	..	..	+4	..	+6	..
(*c*) Anglo-Indians and Domiciled Europeans	—2	..	..	..	+3	..	..	..	+1	..	—2	..	+3	..
(*d*) Sikhs	..	..	+2	..	..	..	..	..	..	..	..	..	+3	..
(*e*) Indian Christians	+2	..	..	..	+1	..	..	..	..	..	..	..	+3	..
(*f*) Other Classes	—1	..	+1	..	—1	..	..	..	—1	..	+1	..	—2	..
(*g*) Total	+3	..	—1	..	+14	..	..	..	—1	..	..	..	+14	..
10·03. GRAND TOTAL	—6	..	—4	..	+3	..	..	..	—3	..	—3	..	—31	..
11. *Percentage of Total*—														
11·01. Europeans	71·2	73·3	70·5	70·7	52·7	57·5	73·3	73·3	59·2	59·4	61·8	63·4	64·0	65·3
11·02. Indians—														
(*a*) Hindus	14·6	12·9	18·5	20·7	29·8	25·9	13·3	13·3	33·1	33·1	16·2	19·7	21·5	21·1
(*b*) Muslims	5·0	4·5	..	..	7·6	7·7	13·4	13·4	0·8	0·7	11·8	5·6	4·1	3·7
(*c*) Anglo-Indians and Domiciled Europeans.	4·6	5·3	5·5	5·3	5·3	4·2	..	..	6·1	5·3	7·3	9·9	6·8	6·5
(*d*) Sikhs	..	..	1·4	..	3·1	3·1	..	..	..	..	..	..	1·0	0·8
(*e*) Indian Christians	2·3	1·3	1·4	1·3	1·5	1·2	..	..	0·8	0·7	..	..	1·0	0·9
(*f*) Other Classes	2·3	2·7	2·7	2·0	..	0·4	..	..	..	0·8	2·9	1·4	1·6	1·7

II.—SENIOR SUBORD NATES.

II.—Statement of Subordinates, drawing Rs. 250 per mensem and over or on scales of pay rising to Rs. 250 per mensem and over employed on Class I Railways, Railway Board and other Railway Offices (excluding H. E. H. the Nizam's State and Jodhpur Railways) on 31st March 1933 as compared with 31st March 1932.

Item.	A. B.		B. N.		B. & N. W.		B. B. & C. I.		BURMA.		E. B.		E. I.		G. I. P.		M. & S. M.		N. W.		R. & K.		S. I.		TOTAL.	
	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1. *Agency Department*—																										
1·01. Europeans	..	..	..	..	..	..	..	..	1	..	2	2	1	1	3	3	..	..	1	1	..	..	..	..	8	7
1·02. Indians—																										
(*a*) Hindus	2	2	5	5	1	1	11	11	4	5	12	12	10	14	3	3	2	2	4	6	1	1	3	3	58	65
(*b*) Muslims	..	..	..	..	..	..	3	3	1	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	4	6
(*c*) Anglo-Indians and Domiciled Europeans	1	1	2	2	1	1	3	3	1	2	..	..	1	1	..	1	..	..	4	5	..	..	1	1	14	17
(*d*) Sikhs	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(*e*) Indian Christians	..	..	..	..	..	..	2	2	1	1	..	..	..	..	3	3	..	..	..	..	..	..	..	..	6	66
(*f*) Other classes	..	..	..	..	..	..	4	4	1	1	..	..	..	..	1	1	..	..	..	..	..	..	..	..	6	6
(*g*) Total	3	3	7	7	2	2	23	23	8	10	12	12	11	16	7	8	2	2	8	12	1	1	4	4	88	100
1·03. GRAND TOTAL	3	3	7	7	2	2	23	23	9	10	14	14	12	17	10	11	2	2	9	13	1	1	4	4	96	107
2. *Accounts Department*—																										
2·01. Europeans	..	..	..	..	..	..	2	1	..	..	1	1	9	10	4	7	..	..	1	1	..	..	..	..	17	20
2·02. Indians—																										
(*a*) Hindus	..	..	32	26	6	5	25	27	9	10	25	31	69	64	18	17	5	6	46	32	1	1	17	18	253	237
(*b*) Muslims	..	..	..	..	2	2	..	..	..	..	..	2	5	3	..	1	..	..	20	17	..	..	1	1	28	26
(*c*) Anglo-Indians and Domiciled Europeans	..	..	35	35	6	6	13	13	9	10	4	3	11	11	9	11	11	9	2	2	..	..	4	5	104	105
(*d*) Sikhs	..	..	2	2	..	..	..	..	..	..	..	..	1	1	1	1	..	..	9	10	..	..	..	..	13	14
(*e*) Indian Christians	..	..	2	2	1	1	2	2	1	..	..	..	..	..	4	3	..	..	1	2	..	..	..	..	11	10
(*f*) Other classes	..	..	..	..	..	..	7	7	..	..	..	..	..	..	5	6	2	2	..	1	..	..	..	..	14	16
(*g*) Tota	..	..	71	65	15	14	47	49	19	20	29	36	86	79	37	39	18	17	78	64	1	1	22	24	423	408
2·03. GRAND TOTAL	..	..	71	65	15	14	49	50	19	20	30	37	95	89	41	46	18	17	79	65	1	1	22	24	440	428
3. *Engineering Department*—																										
3·01. Europeans	1	1	4	8	..	..	12	13	1	1	7	8	49	51	21	27	11	13	31	32	1	2	3	3	141	159
3·02. Indians—																										
(*a*) Hindus	10	10	58	59	6	6	69	72	25	26	35	40	116	118	56	66	18	17	104	111	..	..	20	21	517	546
(*b*) Muslims	2	2	7	5	5	3	13	13	2	2	3	3	9	9	16	16	..	..	71	74	1	1	2	1	131	129
(*c*) Anglo-Indians and Domiciled Europeans	5	5	38	47	13	13	8	10	31	33	20	19	99	115	63	65	24	25	42	40	1	1	10	12	354	385
(*d*) Sikhs	2	2	3	3	1	1	2	1	6	6	1	2	5	3	9	9	..	..	31	33	..	..	..	..	60	60
(*e*) Indian Christians	..	..	2	2	..	..	7	7	2	1	1	1	5	2	15	11	1	..	3	2	..	..	2	2	38	28
(*f*) Other classes	..	..	..	..	..	..	24	22	1	1	..	1	..	..	14	14	2	1	5	10	..	..	..	..	46	49
(*g*) Total	19	19	108	116	25	23	123	125	67	69	60	66	234	247	173	181	45	43	256	270	2	2	34	36	1,146	1,197
3·03. GRAND TOTAL	20	20	112	124	25	23	135	138	68	70	67	74	283	298	194	208	56	56	287	302	3	4	37	39	1,287	1,356

APPENDIX F—*contd.*

II.—*Statement of Subordinates, drawing Rs. 250 per mensem and over or on scales of pay rising to Rs. 250 per mensem and over employed on Class I Railways, Railway Board and other Railway Offices (excluding H. E. H. Nizam's State and Jodhpur Railways) on 31st March 1933 as compared with 31st March 1932*—contd.

Item.	A. B.		B. N.		B. & N. W.		B., B. & C. I		BURMA.		E. B.		E. I.		G. I. P.		M. & S. M.		N. W.		R. & K.		S. I.		TOTAL.	
	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
4. *Transportation*—																										
4·01. Europeans	1	1	23	24	4	4	32	34	2	5	18	18	107	113	173	190	..	..	120	117	1	1	10	7	491	514
4·02. Indians—																										
(*a*) Hindus	6	7	42	44	4	3	108	109	18	18	26	25	50	56	85	81	3	4	71	65	..	..	15	14	428	426
(*b*) Muslims	..	..	6	6	1	1	6	6	2	3	1	1	8	9	14	14	..	..	19	24	..	..	1	1	58	65
(*c*) Anglo-Indians and Domiciled Europeans	12	10	46	50	12	16	42	46	78	79	53	54	157	173	454	476	30	28	78	79	5	5	20	22	987	1,038
(*d*) Sikhs	..	..	1	1	..	..	..	..	..	..	2	2	1	..	1	..	..	..	4	5	..	..	..	..	9	8
(*e*) Indian Christians	..	..	3	2	..	..	19	19	2	2	..	..	1	3	46	42	..	..	4	4	..	..	..	..	75	72
(*f*) Other classes	1	1	..	..	..	..	39	39	21	20	..	..	2	..	46	48	..	..	17	26	..	..	..	..	126	134
(*g*) Total	19	18	98	103	17	20	214	219	121	122	82	82	219	241	646	661	33	32	193	203	5	5	36	37	1,683	1,743
4·03. GRAND TOTAL	20	19	121	127	21	24	246	253	123	127	100	100	326	354	819	851	33	32	313	320	6	6	46	44	2,174	2,257
5. *Commercial*—																										
5·01. Europeans	..	..			..	..							..	..	9	9			4	5			..	..	13	14
5·02. Indians—																										
(*a*) Hindus	3	2			..	..							22	26	31	31			13	13			4	4	73	76
(*b*) Muslims	..	..			1	..							4	3	3	3			5	6			..	..	13	12
(*c*) Anglo-Indians and Domiciled Europeans	..	..	Included under Transportation.		..	..	Included under Transportation.						11	13	7	8	Included under Transportation.		6	4	Included under Transportation.		..	..	24	25
(*d*) Sikhs	..	..			..	..							..	..	..	..			5	6			..	..	5	6
(*e*) Indian Christians	..	..			..	..							..	..	7	4			..	..			..	..	7	4
(*f*) Other Classes	..	..			..	..							..	..	..	1			..	1			..	..	..	2
(*g*) Total	3	2			1	..							37	42	48	47			29	30			4	4	122	125
5·03. GRAND TOTAL	3	2			1	..							37	42	57	56			33	35			4	4	135	139
6. *Mechanical Engineering*—																										
6·01. Europeans	11	11	147	176	11	11	82	63	20	21	40	48	287	327	56	60	67	72	198	189	4	4	27	27	950	1,009
6·02. Indians—																										
(*a*) Hindus	2	3	15	12	..	..	50	46	11	11	25	27	106	106	26	22	4	4	62	48	1	1	25	26	327	306
(*b*) Muslims	1	1	3	2	..	..	8	9	..	..	3	4	15	14	1	1	..	..	58	58	..	..	1	1	90	90
(*c*) Anglo-Indians and Domiciled Europeans	15	15	218	211	15	19	246	280	119	123	90	92	546	530	106	103	97	102	210	203	2	3	119	123	1,783	1,804
(*d*) Sikhs	..	..	4	7	..	..	2	4	4	4	..	..	5	3	2	2	..	..	35	33	..	..	..	..	52	53
(*e*) Indian Christians	1	1	1	1	..	..	7	17	2	2	1	1	7	3	13	12	1	1	3	12	..	..	3	4	39	54
(*f*) Other classes	2	2	1	..	..	..	34	27	12	14	4	4	2	2	9	14	4	4	11	11	..	1	..	..	79	79
(*g*) Total	21	22	242	233	15	19	347	383	148	154	123	128	681	658	157	154	106	111	379	365	3	5	148	154	2,370	2,386
6·03 GRAND TOTAL	32	33	389	409	26	30	429	446	168	175	163	176	968	985	213	214	173	183	577	554	7	9	175	181	3,320	3,395

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
7. Stores Department—																										
7·01. Europeans	..	..	..	..	..	..	3	3	..	..	1	1	5	6	3	3	1	1	7	7	..	..	1	..	21	21
7·02. Indians—																										
(a) Hindus	1	1	7	7	..	..	7	6	4	4	12	12	20	21	2	2	1	1	19	20	..	..	2	2	75	76
(b) Muslims	..	..	..	..	..	..	1	1	..	..	..	..	2	1	..	..	..	..	6	7	..	..	..	..	9	9
(c) Anglo-Indians and Domiciled Europeans	1	1	11	10	1	1	..	..	..	..	4	5	24	28	3	2	3	3	7	7	..	..	2	3	56	60
(d) Sikhs	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	..	..	..	2	2
(e) Indian Christians	..	..	2	2	..	..	3	3	..	..	..	..	..	..	..	1	..	..	1	1	..	..	..	..	6	7
(f) Other classes	..	..	..	..	..	..	1	1	..	..	..	..	..	..	1	1	..	..	2	2	..	..	..	..	4	4
(g) Total	2	2	20	19	1	1	12	11	4	4	16	17	46	50	6	6	4	4	37	39	..	..	4	5	152	158
7·03. Grand total	2	2	20	19	1	1	15	14	4	4	17	18	51	56	9	9	5	5	44	46	..	..	5	5	173	179
8. Other Departments—																										
8·01. Europeans	4	4	31	28	2	3	14	15	..	..	1	..	60	62	1	1	2	2	6	3	..	..	..	1	121	119
8·02. Indians—																										
(a) Hindus	8	7	38	36	3	2	34	34	19	18	12	11	58	64	10	9	15	14	11	11	..	..	2	3	210	209
(b) Muslims	..	..	1	2	..	..	..	1	4	5	2	2	6	6	..	..	..	..	5	4	..	..	1	1	19	21
(c) Anglo-Indians and Domiciled Europeans	3	3	48	48	8	10	17	16	2	2	3	3	60	60	5	8	12	11	8	13	1	1	3	1	170	176
(d) Sikhs	..	..	3	4	..	..	..	..	4	5	..	..	..	..	1	..	..	..	2	2	..	..	..	..	10	11
(e) Indian Christians	..	..	..	..	..	..	3	4	5	5	..	..	1	2	1	4	2	2	2	1	..	..	2	2	16	20
(f) Other classes	..	..	2	3	..	..	8	10	3	2	..	..	1	..	13	9	..	..	1	2	..	..	1	1	29	27
(g) Total	11	10	92	93	11	12	62	65	37	37	17	16	126	132	30	30	29	27	29	33	1	1	9	8	454	464
8·03. Grand total	15	14	123	121	13	15	76	80	37	37	18	16	186	194	31	31	31	29	35	36	1	1	9	9	575	583
9. Railway Board and other Railway offices—																										
9·01. Europeans	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3
9·02. Indians—	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	153	160
(a) Hindus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	26	25
(b) Muslims	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	28	32
(c) Anglo-Indians and Domiciled Europeans	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10	10
(d) Sikhs	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	1
(e) Indian Christians	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	10
(f) Other classes	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	226	238
(g) Total																										
9·03. Grand total	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	228	241

APPENDIX F—*concld.*

II.—Statement of Subordinates, drawing Rs. 250 per mensem and over or on scales of pay rising to Rs. 250 per mensem and over employed on Class I Railways, Railway Board and other Railway Offices (excluding H. E. H. the Nizam's State and Jodhpur Railways) on 31st March 1933 as compared with 31st March 1932—concld.

Item.	A. B.		B. N.		B. & N. W.		B., B. & C. I.		BURMA.		E. B.		E. I.		G. I. P.		M. & S. M.		N. W.		R. & K.		S. I.		TOTAL.	
	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.	1932.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
10. *Total*—																										
10·01. Europeans	17	17	205	236	17	18	145	129	24	27	70	78	518	570	270	300	81	88	368	355	6	7	41	38	1,764	1,866
10·02. Indians—																										
(*a*) Hindus	32	32	197	189	20	17	304	305	90	92	147	158	451	469	231	231	48	48	330	306	3	3	88	91	2,094	2,101
(*b*) Muslims	3	3	17	15	9	6	31	33	9	11	9	12	49	46	34	35	..	..	184	191	1	1	6	5	378	383
(*c*) Anglo-Indians and domiciled Europeans	37	35	398	403	56	66	329	368	240	249	174	176	909	931	647	674	177	178	357	353	9	10	159	167	3,520	3,642
(*d*) Sikhs	2	2	13	17	1	1	4	5	14	15	3	4	12	7	14	12	..	..	88	91	..	..	..	..	161	164
(*e*) Indian Christians	1	1	10	9	1	1	43	54	13	11	2	2	14	10	89	80	4	3	14	22	..	..	7	8	201	202
(*f*) Other classes	3	3	3	3	..	..	117	110	38	38	4	5	5	2	89	94	8	7	36	53	..	1	1	1	310	327
(*g*) Total	78	76	638	636	87	91	828	875	404	416	339	357	1,440	1,465	1,104	1,126	237	236	1,009	1,016	13	15	261	272	6,664	6,819
10·03 GRAND TOTAL	95	93	843	872	104	109	973	1,004	428	443	409	435	1,958	2,035	1,374	1,426	318	324	1,377	1,371	19	22	302	310	8,428	8,685
11. *Increase + Decrease*—																										
11·01. Europeans	..	..	—31	..	—1	..	+16	..	—3	..	—8	..	—52	..	—30	..	—7	..	+13	..	—1	..	+3	..	—102	..
11·02 Indians—																										
(*a*) Hindus	..	..	+8	..	+3	..	—1	..	—2	..	—11	..	—18	..	..	..	..	..	+24	..	..	..	—3	..	—7	..
(*b*) Muslims	..	..	+2	..	+3	..	—2	..	—2	..	—3	..	+3	..	—1	..	..	..	—7	..	..	..	+1	..	—5	..
(*c*) Anglo-Indians and domiciled Europeans	+2	..	—5	..	—10	..	—39	..	—9	..	—2	..	—22	..	—27	..	—1	..	+4	..	—1	..	—8	..	—122	..
(*d*) Sikhs	..	..	—4	..	..	..	—1	..	—1	..	—1	..	+5	..	+2	..	..	..	—3	..	..	..	..	..	—3	..
(*e*) Indian Christians	..	..	+1	..	..	..	—11	..	+2	..	..	..	+4	..	+9	..	+1	..	—8	..	..	..	—1	..	—1	..
(*f*) Other classes	..	..	..	..	..	..	+7	..	..	..	—1	..	+3	..	—5	..	+1	..	—17	..	—1	..	..	..	—17	..
(*g*) Total	+2	..	+2	..	—4	..	—47	..	—12	..	—18	..	—25	..	—22	..	+1	..	—7	..	—2	..	—11	..	—155	..
11·03. GRAND TOTAL	+2	..	—29	..	—5	..	—31	..	—15	..	—26	..	—77	..	—52	..	—6	..	+6	..	—3	..	—8	..	—257	..
12. *Percentage of total*—																										
12·01. Europeans	17·9	18·3	24·3	27·1	16·3	16·5	14·9	12·8	5·6	6·1	17·1	17·9	26·5	28·0	19·6	21·0	25·5	27·2	26·7	25·9	31·6	31·8	13·6	12·3	20·9	21·5
12·02. Indians—																										
(*a*) Hindus	33·7	34·4	23·4	21·7	19·2	15·5	31·3	30·4	21·0	20·8	35·9	36·3	23·0	23·1	16·8	16·2	15·1	14·8	24·0	22·3	15·8	13·6	29·1	29·4	24·8	24·2
(*b*) Muslims	3·2	3·2	2·0	1·7	8·7	5·5	3·2	3·3	2·1	2·5	2·2	2·8	2·5	2·3	2·5	2·5	..	..	13·4	13·9	5·2	4·5	2·0	1·6	4·5	4·4
(*c*) Anglo-Indians and domiciled Europeans	38·9	37·7	47·2	46·2	53·8	60·6	33·8	36·6	56·1	56·2	42·5	40·5	46·4	45·8	47·1	47·3	55·6	54·9	25·9	25·7	47·4	45·5	52·6	53·9	41·8	41·9
(*d*) Sikhs	2·1	2·1	1·5	2·0	1·0	1·0	0·4	0·5	3·3	3·4	0·8	0·9	0·6	0·3	1·0	0·8	..	..	6·4	6·7	..	..	..	..	1·9	1·9
(*e*) Indian Christians	1·0	1·1	1·2	1·0	1·0	0·9	4·4	5·4	3·0	2·4	0·5	0·5	0·7	0·4	6·5	5·6	1·3	0·9	1·0	1·6	..	..	2·3	2·5	2·4	2·3
(*f*) Other classes	3·2	3·2	0·4	0·3	..	..	12·0	11·0	8·9	8·6	1·0	1·1	0·3	0·1	6·5	6·6	2·5	2·2	2·6	3·9	..	4·6	0·4	0·3	3·7	3·8

APPENDIX G.

Statement showing the number of appointments created and vacancies which occurred among officers of Gazetted rank on State Railways and of corresponding rank on Companies' Railways (Class I) excluding H. E. H. the Nizam's State and Jodhpur Railways, and how they were filled during 1932-33.

Department.	No. of vacancies which occurred in previous years not filled in those years remaining to be filled.	No. of new appointments created during the year.	No. of vacancies which occurred during the year.	No. of appointments abolished during the year.	No. of net vacancies to be filled.	No. of vacancies not filled up during the year.	No. of vacancies actually filled.	Filled by: Europeans.	Filled by: Indians: Hindus.	Muslims.	Anglo-Indians and Domiciled Europeans.	Sikhs.	Indian Christians.	Other classes.	Total.
1	2	3	4	5	6 (a)	7 (a)	8	9	10	11	12	13	14	15	16
1. Agency	..	..	4	..	4	..	(b) 4	..	..	..	..	..	..	..	..
2. Accounts	2	..	..	..	2	2	..	..	..	..	..	..	..	..	..
3. Engineering	..	..	15	..	15	15	..	..	..	..	..	..	..	..	..
4. Transportation (Traffic) and Commercial.	..	1	11	1	11	10	1	..	..	..	1	..	..	..	1
5. Transportation (Power) and Mechanical Engineering.	..	1	10	..	11	5	6	2	1	1	1	..	1	..	4
6. Stores Department	5	..	1	..	6	6	..	..	..	..	..	..	..	..	..
7. Other Departments	..	4	8	1	11	7	4	2	1	..	1	..	..	..	2
8. Total—															
1932-33	7	6	49	2	60	45	15	4	2	1	3	..	1	..	7
1931-32	7	..	40	105	..	..	33	7	8	1	16	..	..	..	25
9. Percentage of Europeans to number of vacancies filled—															
1932-33	..	..	..	..	..	..	36·4	..	..	..	..	..	..	..	..
1931-32	..	..	..	..	..	..	22·0	..	..	..	..	..	..	..	..
10. Percentage of Indians to number of vacancies filled—															
1932-33	..	..	..	..	..	..	63·6	..	..	..	..	..	..	..	..
1931-32	..	..	..	..	..	..	78·0	..	..	..	..	..	..	..	..
OTHER RAILWAYS.															
Assam Bengal Railway.															
1. Agency	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Accounts	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Engineering	..	..	3	..	3	3	..	..	..	..	..	..	..	..	..
4. Transportation and Commercial	..	1	1	2	..	..	..	..	..	..	..	..	..	..	..
5. Mechanical	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6. Stores	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7. Other Departments	1	..	1	..	2	..	2	1	..	..	1	..	..	..	1
8. Total—															
1932-33	1	1	5	2	5	3	2	1	..	..	1	..	..	..	1
1931-32	1	1	8	2	8	1	7	6	1	..	..	..	..	..	1
9. Percentage of Europeans to number of vacancies filled—															
1932-33	..	..	..	..	..	..	50·0	..	..	..	..	..	..	..	..
1931-32	..	..	..	..	..	..	85·7	..	..	..	..	..	..	..	..
10. Percentage of Indians to number of vacancies filled—															
1932-33	..	..	..	..	..	..	50·0	..	..	..	..	..	..	..	..
1931-32	..	..	..	..	..	..	14·3	..	..	..	..	..	..	..	..

(a) As a result of a number of posts being abolished during the year 1931-32 there was an excess of officers in certain Departments and consequently some of the vacancies to be filled during the year were taken as a set off against the excess.

(b) Since the primary object of this statement is to show the number of new entrants into Gazetted services by race and community, the vacancies in the Agency Department which were filled by transfer of existing officers from other departments are disregarded for the purpose of columns 9 to 16.

APPENDIX G—*contd.*

Statement showing the number of appointments created and vacancies which occurred among officers of Gazetted rank on State Railways and of corresponding rank on Companies' Railways (Class I) excluding H. E. H. the Nizam's State and Jodhpur Railways, and how they were filled during 1932-33—contd.

Departments.	No. of vacancies which occurred in previous years not filled in those years remaining to be filled.	No. of new appointments created during the year.	No. of vacancies which occurred during the year.	No. of appointments abolished during the year.	No. of net vacancies to be filled.	No. of vacancies not filled up during the year.	No. of vacancies actually filled.	FILLED BY							
								Europeans.	INDIANS.						
									Hindus.	Muslims.	Anglo-Indians and Domiciled Europeans.	Sikhs.	Indian Christians.	Other classes.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Bengal and North Western Railway.															
1. Agency	..	1	..	..	1	..	1	1	..	..	..	..	..	..	..
2. Accounts	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Engineering	1	..	1	..	2	..	2	2	..	..	..	..	..	..	..
4. Transportation and Commercial	2	..	1	..	3	1	2	1	..	..	1	..	..	..	1
5. Mechanical	..	..	1	..	1	..	1	1	..	..	..	..	..	..	..
6. Stores	1	..	..	..	1	1	..	..	..	..	..	..	..	..	..
7. Other Departments	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8. TOTAL— 1932-33	4	1	3	..	8	2	6	5	..	..	1	..	..	..	1
1931-32	2*	1	3	..	6*	4*	2	2	..	..	..	..	..	..	..
9. Percentage of Europeans to number of vacancies filled— 1932-33	..	..	..	..	..	..	83·3	..	..	..	..	..	..	..	..
1931-32	..	..	..	..	..	..	100·0	..	..	..	..	..	..	..	..
10. Percentage of Indians to number of vacancies filled— 1932-33	..	..	..	..	..	..	16·7	..	..	..	..	..	..	..	..
1931-32	..	..	..	..	..	..	*Nil.*	..	..	..	..	..	..	..	..
Bengal Nagpur Railway.															
1. Agency	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Accounts	1	..	..	..	1	1	..	..	..	..	..	..	..	..	..
3. Engineering	3	2	6	11	..	7	—7	—5	—2	..	..	..	..	..	—2
4. Transportation and Commercial	3	..	1	..	4	3	1	..	..	..	1	..	..	..	1
5. Mechanical	5	..	..	..	5	3	2	1	1	..	..	..	..	..	1
6. Stores	..	..	1	..	1	..	1	1	..	..	..	..	..	..	..
7. Other Departments	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8. TOTAL— 1932-33	12	2	8	11	11	14	—3	—3	—1	..	1	..	..	..	..
1931-32	15	1	17	15	18	12	6	2	3	—1	3	..	..	—1	4
9. Percentage of Europeans to number of vacancies filled— 1932-33	..	..	..	..	..	..	—100·0	..	..	..	..	..	..	..	..
1931-32	..	..	..	..	..	..	33·3	..	..	..	..	..	..	..	..
10. Percentage of Indians to number of vacancies filled— 1932-33	..	..	..	..	..	..	*Nil.*	..	..	..	..	..	..	..	..
1931-32	..	..	..	..	..	..	66·7	..	..	..	..	..	..	..	..
Bombay, Baroda and Central India Railway.															
1. Agency	2	1	3	1	5	3	2	1	1	..	..	..	..	..	1
2. Accounts	..	..	1	..	1	1	..	..	..	..	..	..	..	..	..
3. Engineering	8	2	2	4	8	6	2	..	1	..	..	1	..	..	2
4. Transportation and Commercial	3	..	4	2	5	3	2	1	..	..	..	..	1	..	1
5. Mechanical	2	..	..	1	1	1	..	..	..	..	..	..	..	..	..
6. Stores	1	..	..	..	1	..	1	..	1	..	..	..	..	..	1
7. Other Departments	3	..	1	..	4	1	3	1	1	1	..	..	..	..	2
8. TOTAL— 1932-33	19	3	11	8	25	15	10	3	4	1	..	1	1	..	7
1931-32	12	1	16	6	23*	19*	4	2	1	..	..	..	..	1	2
9. Percentage of Europeans to number of vacancies filled— 1932-33	..	..	..	..	..	..	30·0	..	..	..	..	..	..	..	..
1931-32	..	..	..	..	..	..	50·0	..	..	..	..	..	..	..	..
10. Percentage of Indians to number of vacancies filled— 1932-33	..	..	..	..	..	..	70·0	..	..	..	..	..	..	..	..
1931-32	..	..	..	..	..	..	50·0	..	..	..	..	..	..	..	..

* Revised figures.

APPENDIX G—*concld.*

Statement showing the number of appointments created and vacancies which occurred among officers of Gazetted rank on State Railways and of corresponding rank on Companies' Railways (Class I) excluding H. E. H. the Nizam's State and Jodhpur Railways, and how they were filled during 1932-33—concld.

Departments.	No. of vacancies which occurred in previous years not filled in those years remaining to be filled.	No. of new appointments created during the year.	No. of vacancies which occurred during the year.	No. of appointments abolished during the year.	No. of net vacancies to be filled.	No. of vacancies not filled up during the year.	No. of vacancies actually filled.	FILLED BY							
									INDIANS.						
								Europeans.	Hindus.	Muslims.	Anglo-Indians and Domiciled Europeans.	Sikhs.	Indian Christians.	Other classes.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Madras and Southern Mahratta Railway.															
1. Agency	..	..	1	..	1	1	..	..	..	..	..	..	..	..	..
2. Accounts	..	..	1	..	1	1	..	..	..	..	..	..	..	..	..
3. Engineering	2	..	2	..	4	2	2	..	2	..	..	..	..	..	2
4. Transportation and Commercial	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..
5. Mechanical	..	..	1	..	1	..	1	1	..	..	..	..	..	..	..
6. Stores	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7. Other Departments	1	..	1	..	2	1	1	1	..	..	..	..	..	..	..
8. TOTAL— 1932-33	3	..	7	1	9	5	4	2	2	..	..	..	..	..	2
1931-32	5	..	6	6	5	3	2	..	..	..	2	..	..	..	2
9. Percentage of Europeans to number of vacancies filled— 1932-33	..	..	..	..	..	..	50·0	..	..	..	..	..	..	..	..
1931-32	..	..	..	..	..	..	*Nil.*	..	..	..	..	..	..	..	..
10. Percentage of Indians to number of vacancies filled— 1932-33	..	..	..	..	..	..	50·0	..	..	..	..	..	..	..	..
1931-32	..	..	..	..	..	..	100·0	..	..	..	..	..	..	..	..
Rohilkhand and Kumaon Railway.															
1. Agency	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Accounts	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Engineering	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4. Transportation and Commercial	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5. Mechanical	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6. Stores	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7. Other Departments	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8. TOTAL— 1932-33	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1931-32	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
9. Percentage of Europeans to number of vacancies filled— 1932-33	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1931-32	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Percentage of Indians to number of vacancies filled— 1932-33	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1931-32	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
South Indian Railway.															
1. Agency	..	..	1	..	1	..	1	..	1	..	..	..	..	..	1
2. Accounts	..	..	2	..	2	..	2	..	1	..	1	..	..	..	2
3. Engineering	6	..	2	4	4	5	..	..	..	..	..	..	..	..	..
4. Transportation and Commercial	3	1	1	..	5	3	1	1	..	..	..	..	..	..	..
5. Mechanical	2	..	..	..	2	1	2	1	1	..	..	..	..	..	1
6. Stores	2	..	..	1	1	..	..	..	..	..	..	..	..	..	..
7. Other Departments	1	..	..	..	1	1	..	..	..	..	..	..	..	..	..
8. TOTAL— 1932-33	14	1	6	5	16	10	6	2	3	..	1	..	..	..	4
1931-32	11	3	12	9	17	14	3	..	2	..	1	..	..	..	3
9. Percentage of Europeans to number of vacancies filled— 1932-33	..	..	..	..	..	..	33·3	..	..	..	..	..	..	..	..
1931-32	..	..	..	..	..	..	*Nil.*	..	..	..	..	..	..	..	..
10. Percentage of Indians to number of vacancies filled— 1932-33	..	..	..	..	..	..	66·7	..	..	..	..	..	..	..	..
1931-32	..	..	..	..	..	..	100·0	..	..	..	..	..	..	..	..

APPENDIX H.

Officers of the Railway Department (Railway Board) on 31st March 1933.

The Hon'ble Sir JOSEPH BHORE, K.C.S.I., K.C.I.E., C.B.E., I.C.S.,
Member of Council of Governor General.

Railway Board.

Sir Guthrie Russell, Kt.	Chief Commissioner of Railways.
Mr. P. R. Rau	Financial Commissioner of Railways.
Mr. C. P. Colvin, O.B.E.	Member.

Mr. A. F. Harvey, F.C.H.	Director, Civil Engineering (*Offg.*).
Mr. N. D. Calder	Director, Traffic (*Offg.*).
Mr. T. S. Sankara Aiyar, B.A., B.E.	Director, Finance (*on leave*).
Mr. V. S. Sundaram	Director, Finance (*Offg.*).
Rai Bahadur Mathra Das	Director, Establishment (*Offg.*).
Mr. L. H. Kirkness, D.S.O., O.B.E., V.D.	Secretary (*Offg.*).
Mr. T. G. Creighton	Deputy Director, Mechanical Engineering (*Offg.*).
Mr. A. M. Ali	Deputy Director, Traffic (Transportation) (*Offg.*).
Mr. F. D'Souza	Deputy Director, Traffic (Commercial) (*on leave*).
Mr. J. I. Pearse	Deputy Director, Traffic (Commercial) (*Offg.*).
Mr. K. M. Hassan	Deputy Director, Establishment.
Khan Bahadur Barkat Ali	Deputy Director, Finance.
Mr. E. C. Rundlett	Assistant Secretary.

Honorary Assistant Personnel Officer.

Rai Bahadur Ishar Das Puri	Honorary Assistant Personnel Officer (*on leave*).

Attached Officers.

Major H. W. Wagstaff, M.C., R.E.	Supervisor of Railway Labour (*on leave*).
Khan Bahadur Z. H. Khan	Supervisor of Railway Labour (*Offg.*).
Mr. H. C. B. Jollye, B.A.	Timber Advisory Officer.
Mr. R. O. C. Thomson	Officer on Special Duty.

Controller of Railway Accounts.

Mr. L. S. Deane	Controller of Railway Accounts.
Mr. C. V. S. Rao	Deputy Controller of Railway Accounts.
Mr. H. G. Ward	Assistant Controller of Railway Accounts.

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